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NO21'52

November, 1952

SOAP and Sanitary Chemicals

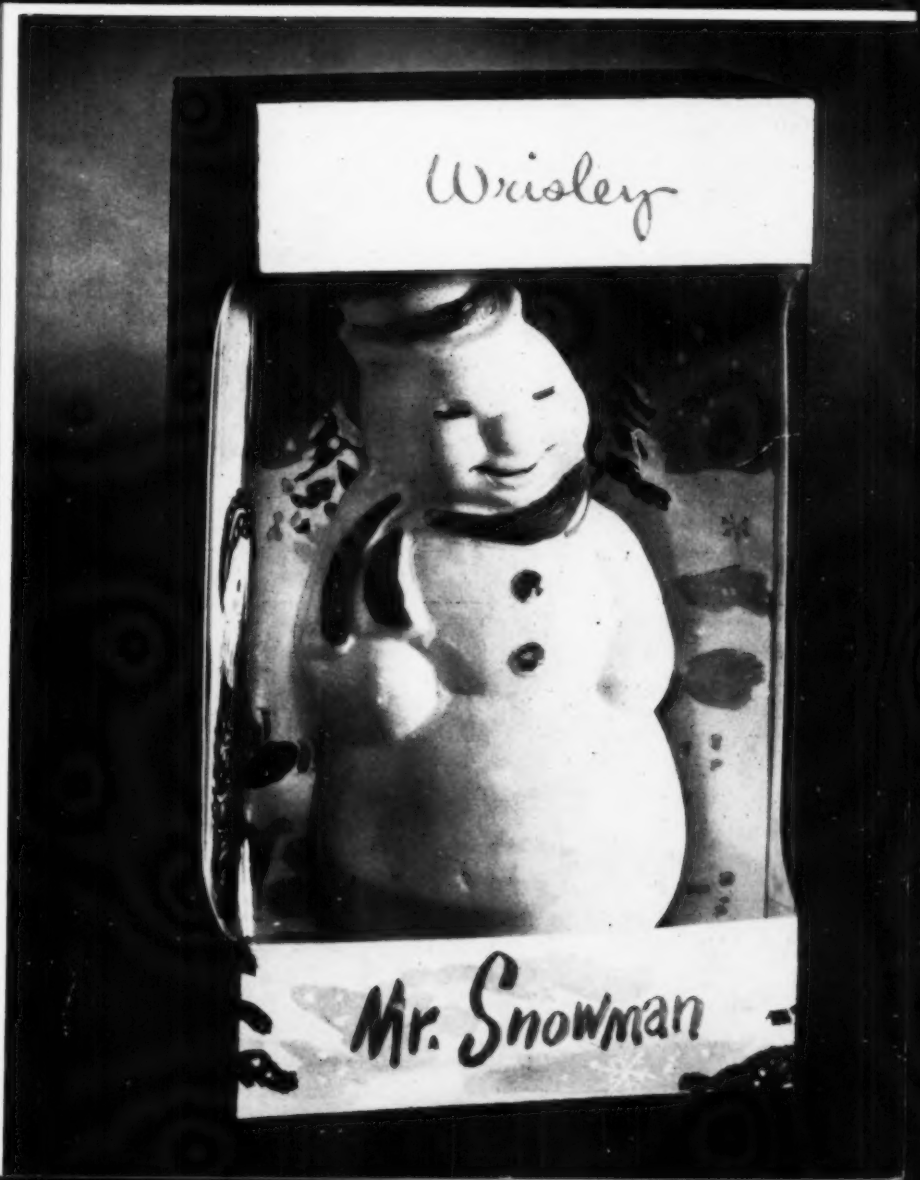
In this issue...

Industrial hand cleaners are improved with antiseptic

Lindane vaporizers—Safe for use in food handling?

Detecting wax additives by instrumental analyses

Glassy phosphates—soap's new weapon for synthetics



Cover photo . . . New "Mr. Snowman" castile soap novelty for the holiday season made by Allen B. Wrisley Co., Chicago. Snowy background shows through cellophane front.

1-5

Good News FOR YOUR ISOPROPYL ALCOHOL PRODUCTS!

Isoblend Floral Odors

NEW FLOWER FRAGRANCES FOR USE WITH ISOPROPYL ALCOHOL

These new Isoblend Floral Odors cover the Isopropyl Alcohol odor and, at the same time, add a lovely flower note. They enable you to make a finished toilet water, colored any shade you desire, at the astonishingly low price of ..... **83¢** per gallon

ODORS AVAILABLE

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Lilac Isoblend	Fougere Isoblend	Wisteria Isoblend
Bouquet Isoblend	Sweet Pea Isoblend	Gardenia Isoblend
Honeysuckle Isoblend	Pine Needle Isoblend	Eau de Cologne Isoblend
Apple Blossom Isoblend	Spice Bouquet Isoblend	Orange Blossom Isoblend

Bay Rum ISOBLEND

For Bay Rum products made with Isopropyl Alcohol

This special oil, recently developed by our Laboratories, is available at only $4.25 per pound.

Formula for Use:

2 ozs.—Bay Rum Isoblend
64 ozs.—Isopropyl Alcohol 99%
Water—Quantity sufficient to make one gallon

Color—As desired

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For Shaving Lotion made with Isopropyl Alcohol

Here is an oil developed especially for top quality, low priced shaving lotions. At $8.00 per pound, you can make a gallon of finished Shaving Lotion for only 80c.

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All prices
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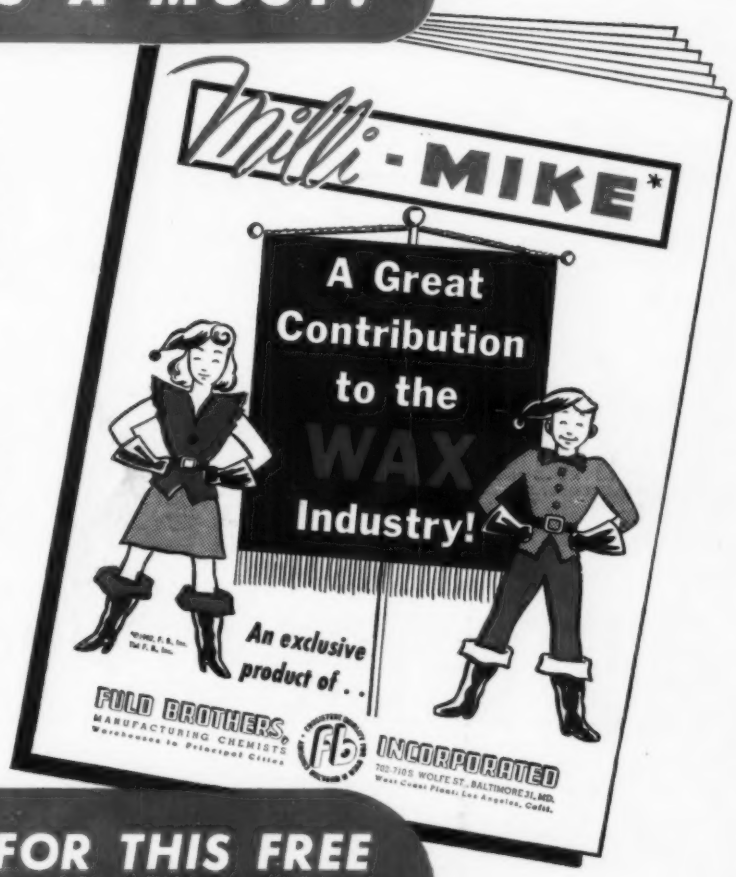

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greater sudsing

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Santomerse 80 provides you with a synthetic detergent in concentrated form. It is recommended for use wherever excellent sudsing and wetting and optimum detergency are required.

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CHEMICALS — PLASTICS

Serving Industry . . . Which Serves Mankind

SOAP and Sanitary Chemicals

Volume XXVIII, No. 11 November, 1952

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A lining for tank cars which is only 1/50th of an inch thick—scarcely more than a film—first made practicable the shipment of liquid caustic soda in high concentrations without metallic contamination. As numerous processes necessitate the use of caustic in its purest form, this Columbia-Southern development has enabled many companies to effect economies in their use of this essential raw material.

In spite of its thinness, this patented lining effectively seals the caustic from the steel of the tank car, and its purity—even at highest concentrations—is safeguarded throughout transit.

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The usefulness of caustic soda to industry is based upon this very power to attack and break down the chemical structure of many materials. In the manufacture of rayon, for example, caustic soda digests and purifies the cellulose . . . in the making of soap, it decomposes fats. This chemical activity of caustic soda makes it a vital raw material in a wide variety of industrial applications, and especially in the manufacture of other chemicals.

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SUBSIDIARY OF PITTSBURGH PLATE GLASS COMPANY

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lotion type liquid
hand soap with lanolin
and chlorophyll PLUS other
emollients and deodorants.

SPECIFY... 40 plus

LIQUID HAND SOAP

with LANOLIN PLUS CHLOROPHYLL

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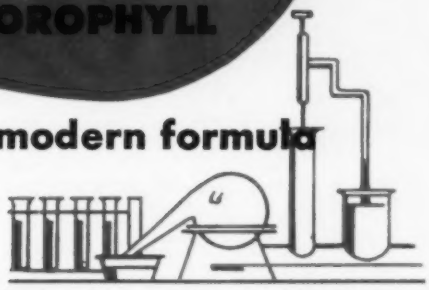
AMERICA'S FINEST LIQUID HAND SOAP

new, modern formula



Contains Nature's own soothing lanolin and other non-chap emollients and new cosmetic action detergents, instead of harsh skin irritants. New chlorophyll formula plus other deodorants safely removes occupational odors from hands—no after smell. Available with or without delightful perfumed fragrance. 40 PLUS has EVERYTHING.

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entirely Different

surprisingly Low Cost

BASIC RAW MATERIAL

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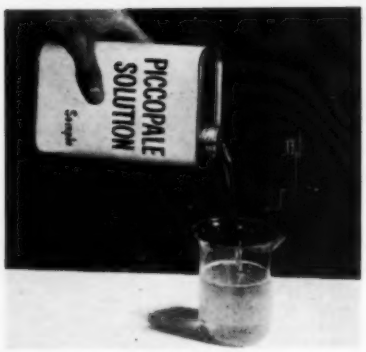

or in Solution

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Transparent, Thermoplastic

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write for complete data and samples

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CLAIRTON, PENNSYLVANIA

Please send sample of PICCOPALE for (*application*)

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(*check*) flake ☐ solid ☐ liquid solution ☐

Name_____

Company_____

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Liquid Castile Soap Shampoo
Liquid Coconut Oil Soap Shampoo
Liquid Olive Oil Soap Shampoo
(50% Olive Oil Base)

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40%, 30% and 20% Coconut Oil
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Now, Kranich offers a full line of flake and granular soaps to the trade for resale to hospitals, hotels, institutions, etc. for laundering and general maintenance cleaning, and for converters. A flake or granular soap grade to meet every trade need. Ask us for further information and a copy of our new price list.

For 30 years, exclusively manufacturers of soap specialties for the jobber and converter.

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EMPIRE FLAKE and GRANULATED SOAP

Tops in soap quality. Made from finest tallow and coconut oil. Chalk-cliff white, tissue thin, neutral and free from additives, oxidants, etc. Flakes contain 92% pure soap; granular 94%. Recommended for washing linens, silks, and other fine fabrics. No finer soap quality than EMPIRE!

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TRICOL

A special built soap-base detergent excellent for heavy-duty cleaning, washing and laundering. Granulated. Made from tallow-coconut soap base.

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Candy's Wax with LUDOX* added

Candy's NEW NAME for the new floor treatment for Increased Anti-Slip Greater Durability Lower Floor Maintenance Cost

2 GRADES

CAND-DOX #CS
Originally offered as CANDY'S SUPREME Special WR-AS in July 1950

CAND-DOX #BB
Originally offered as BRIGHT BEAUTY Special WR-AS in June 1951

CAND-DOX #CS and BB are made in any total percentage of solids 8% to 18% and in 24% concentrate.

CAND-DOX #CS is slighty more durable and higher priced than CAND-DOX #BB in like percentage of total solids.

CAND-DOX floor treatments represent the finest products available where a higher than minimum recognized standard of anti-slip quality is desired. The resultant films from the use of these products are *HARD*, non-tacky, and will withstand wear, dirt and discoloring traffic marks.

DURABILITY and ANTI-SLIP . . . CAND-DOX products include a compensating factor—LUDOX*—in itself harder than wax. The addition of LUDOX* to the proper wax bases, perfected purposely to accomodate this additive, causes a greater coefficient of friction and therefore greater safety underfoot.

WATER RESISTANCE and REMOVABILITY in proper balance are very important in every maintenance program. In the development of the wax emulsion bases that go into CAND-DOX floor treatments, the important all-around high qualities of our (Standard) CANDY'S SUPREME, BRIGHT BEAUTY and other well known and accepted waxes were taken into consideration and accomplished in the final CAND-DOX products containing the new bases plus additive.

BEAUTY of floors maintained with CAND-DOX floor treatments, which are both hard and very anti-slip, is no less than remarkable and equal to the lustre for which our products have long been famed. The same buffing can be applied, if desired, and the same gloss will result.

Our policy in regard to use of new additives to our floor waxes has always been clear-cut . . . if a definite improvement can be accomplished we endeavor to formulate and combine new ingredients in such a way as to *conform to our very high standards of product function.* These standards in no case are ever sacrificed to climb on any "bandwagon" of *sales* appeal.

The laboratory work in ours or any organization is very important and the starting point for research and development of new useful products. However, FIELD TESTING is the real proof of the real value of any floor treatment. CAND-DOX floor treatments have been thoroughly field tested and are now being sold in quantity by many of our distributors, with success—again proving merit in FIELD USE.

** CAND-DOX contains CANDY'S wax emulsion with LUDOX* Colloidal silica added in such proportion as to *fully* deliver the usefulness of this additive to floor wax. *Trademark of E. I. du Pont de Nemours & Co., (Inc.) Reg. U. S. Pat. Off.

CAND-DOX is available for private brand resale and is sold only through distributors except for experimental accounts in Chicago essential to research.

Why not write us today for *free* samples and prices so that you can make your own FIELD TESTS?

The most complete line of water emulsion waxes of the highest quality available anywhere

CANDY'S SUPREME (Standard)
CANDY'S DELUXE
BRIGHT BEAUTY (Standard)
CANDY'S #640
CANDY'S SUPREME Special WR
#CS CAND-DOX
#BB CAND-DOX

All the above CANDY products are listed by Underwriters' Laboratories as "anti-slip floor treatment materials."

Wax Specialists for over 60 years

Candy & Company, Inc.

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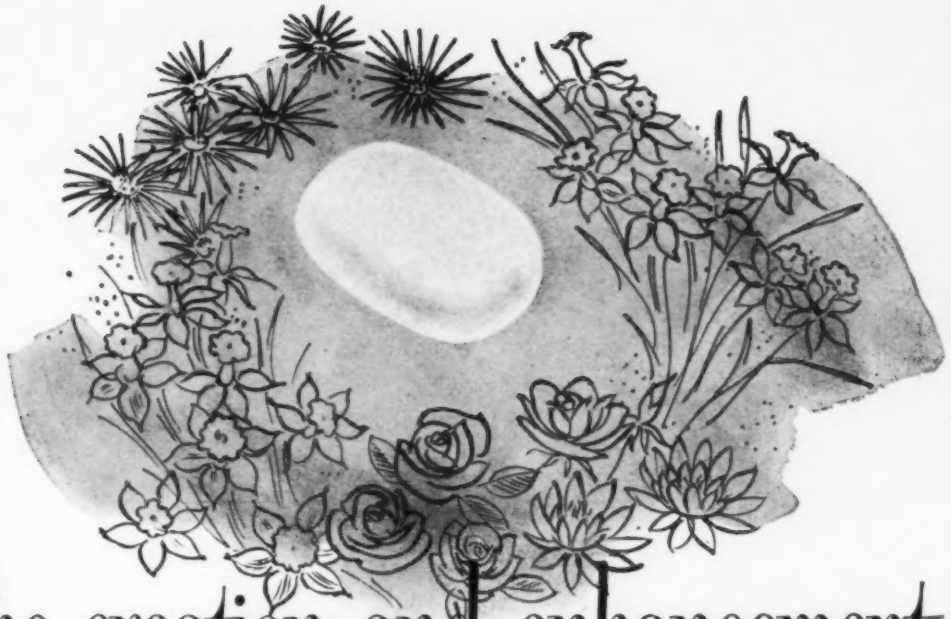

For the creation and enhancement of soap perfumes

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Allyl Cyclohexanepropionate... in small proportions, a valuable top note for many soap formulations.

C·64®... a colorless, stable aromatic that blends excellently with citrus oils and is characterized by a powerful, earthy note.

C·66 (Dow)... an unusually stable, fresh, floral note particularly useful in light, flowery soap bouquets.

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Iso Cyclo Citral-S... extremely useful in floral soap compositions, an aromatic with the clear, natural note of the green leaf.

Synalyl D... partially replaces Linalyl Acetate with a character that lends a finer and fresher bouquet.

Dow also makes a complete range of finished soap bouquets for hand and shaving soaps, liquid and laundry soaps and detergents. Write Dow today on your company letterhead for complimentary samples.

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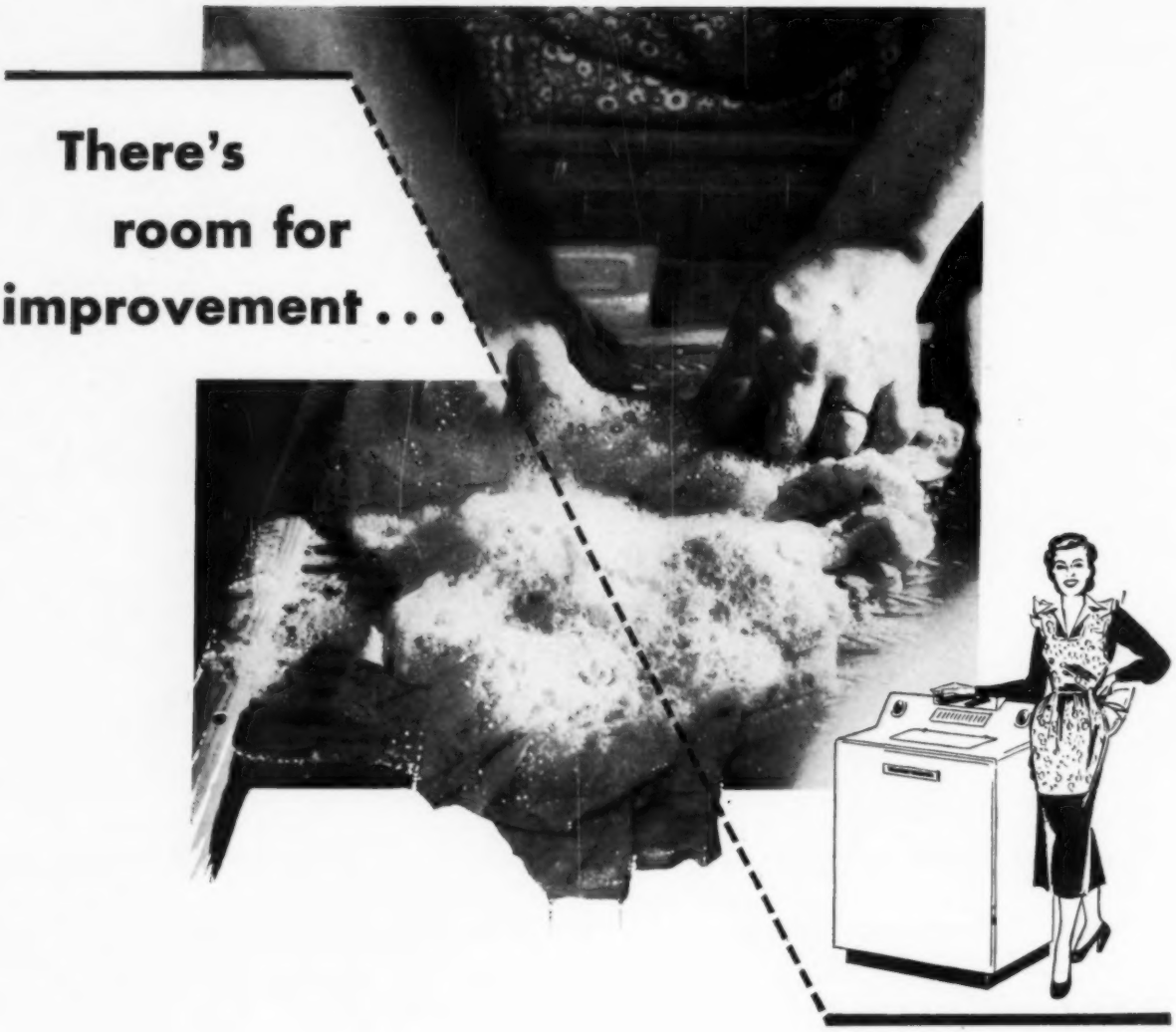
DOW

Exclusive Sales Representatives for **SYNAROME** *in the United States, Canada and Cuba*

There's room for improvement . . .



There's room for improvement in odor in many soaps on the market today. The right perfume in a product means consumer preference. Call in the van Ameringen-Haebler perfume specialists to improve your soap and your sales with a persuasive perfume.

MANUFACTURERS AND CREATORS OF THE FINEST PERFUME MATERIALS

van ameringen · haebler, inc.

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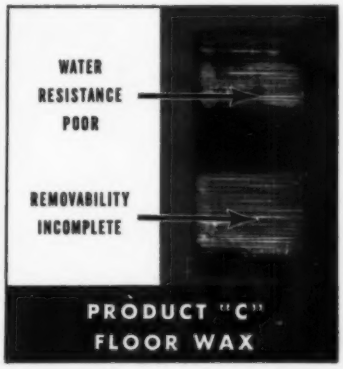
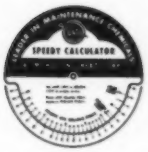
Waxes A, B, C and D get the "Brush-Off" in this test!

Only WHIZ Triple Service Self-Polishing Wax has both Water Resistance and Removability

WATER RESISTANCE saves your customers money because it means protection against "tracked-in" moisture, plus long wear and low-cost maintenance by "damp mopping." EASE OF REMOVABILITY cuts wax "stripping" time and prevents hard-to-remove wax build-up. In the standard "brush machine" test, WHIZ Triple Service Wax was the only one of five nationally sold and nationally advertised waxes to stand out in both qualities.



Tests show TRIPLE SERVICE Superiority—TEST PANELS from the "Scrubbing Machine" show where Triple Service Wax excels. When scrubbed with plain water in the WATER RESISTANCE test (equal to 50 damp moppings), it did not come off and did not lose gloss; when scrubbed with soap in the REMOVABILITY test, Triple Service came off completely. PRODUCT "C" failed the test, as did the other samples tested. It had little resistance to plain water, yet was not completely removed by soap solution.



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WHIZ SPEEDY CALCULATOR

Handy for finding selling prices and percentage of profit at a glance. Write for yours—it's free.

Industrial Division
***R. M. Hollingshead* Corporation**
LEADER IN MAINTENANCE CHEMICALS
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LAB-TESTED, FIELD-TESTED—
BEST QUALITY *EVER* IN THE
LOW PRICE RANGE

- **Packaged in 1, 5 and 55-gal. containers**
- **Available for private label**
- **Write for prices**

You've got a great sales story when you sell Triple Service Wax! Write for more details!

for Water Softeners

. . . Bath Crystals

. . . Cleaning Compounds

SNOWFLAKE CRYSTALS is a true sesquicarbonate of soda made by Solvay. A beautiful, snow-white, crystalline product of top quality and purity, SNOWFLAKE CRYSTALS has been used for over 50 years by America's foremost compounders and repackers. Solvay Technical Service is available to help you with any problems regarding your formulae. Contact the nearest Solvay office; there's no obligation.

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Monochlorobenzene • Para-dichlorobenzene • Ortho-dichlorobenzene
Ammonium Bicarbonate • Ammonium Chloride

Federal SIL-LOX

Fortified with LUDOX* COLLOIDAL SILICA

with SIL-LOX *you get*

- ALL GLOSS SLIP RESISTANT
- SELF POLISHING BRILLIANCE
- WATER RESISTANCE
- RESISTANCE TO FREEZING

SAFETY ENGINEERED FOR HAZARDOUS FLOORS

Sil-Lox dries in a matter of minutes to an exceptionally lustrous finish. It's self-polishing and water resistant. It's *siliconized*—fortified with LUDOX* colloidal silica, which is harder than wax itself.

Federal Sil-Lox has been tested by the Underwriters' Laboratory, Inc. It carries their approval and is listed with them as an anti-slip material.

Safety is an important factor for *all* floors. Sil-Lox, because it is Siliconized, is slip resistant, gives floors a safer, longer wearing coating of extra beauty.

Every commercial floor where wax is now used needs this new, slip-resistant siliconized floor coating. The market is tremendous—why not write now for more information on this newest innovation in floor coatings.

*Trade Mark of E. I. Du Pont de Nemours & Co., Inc., Reg. U. S. Pat. Off.

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Alkyd Resins

Cleaners

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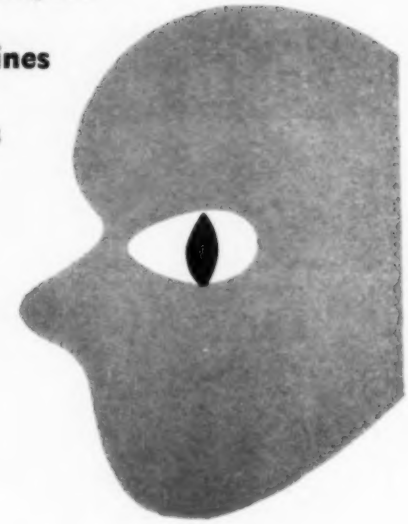
Polishes



look at all the products made with Coconut Fatty Acids

This list is always growing, but will never outgrow our ability to supply the right product for *any* coconut fatty acid application.

Our Regular grade — single distilled — is equal to many double distilled materials, and is of course less expensive. Our Special grade has had most of the caproic, caprylic and capric constituents removed to give a product particularly suited for resin, detergent and cosmetic manufacture.

We also supply Split grades for applications where high performance and reaction levels are necessary but color is unimportant.

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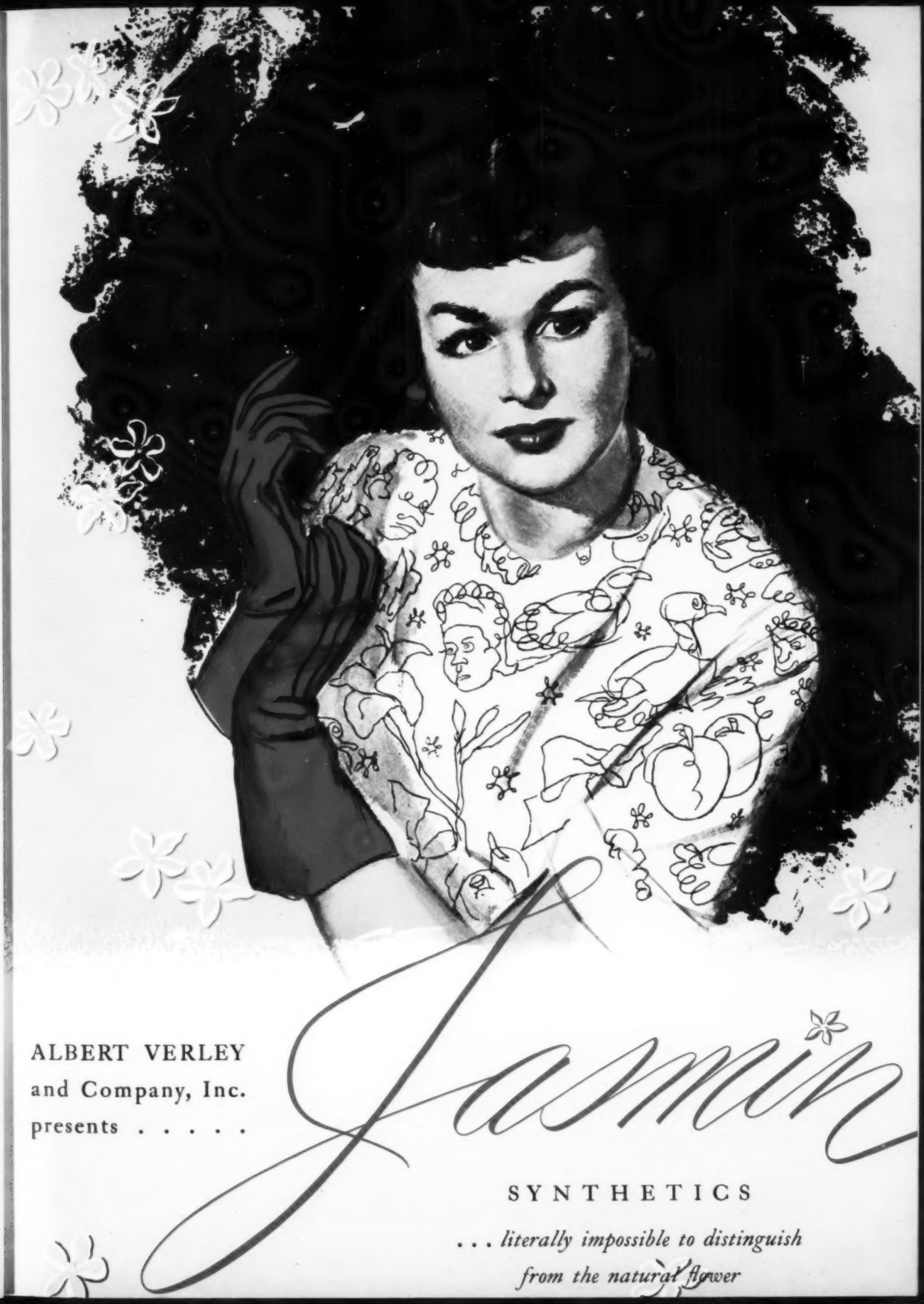
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and Company, Inc.
presents . . . . .
Jasmin
SYNTHETICS
. . . literally impossible to distinguish
from the natural flower

Jasmin

SYNTHETICS

by Albert Verley & Company, Inc.

reach new heights of fragrance and fidelity as substitutes, in part or whole, for the natural product

For many years, the development of Jasmin specialties and compositions has been a particular interest of the staff of Albert Verley & Company, Inc. A few of our materials are listed below — true similes of this essential flower. You can use them to match the fragrance of the natural product with uncanny fidelity — both in your Jasmin odors and for the Jasmin note indispensable in so many perfume compositions. And you enjoy important savings. These Jasmin developments deserve more than passing notice. Ask us for working sample and prices — or consult us in confidence regarding your individual problem.

Materials for Jasmin

JASMIN BLOSSOM "V" JASMIN INCOLORE
HOMO JASMONE JASMINTEME
JASMIN SUMMUS ALDEHYDE JASMINIQUE
JASMOGENE ALCOOL JASMINIQUE

ALBERT VERLEY AND CO., INC.
466-472 W. Superior St., Chicago 10, Ill.
114-116 E. 25th St., New York 10, N. Y.

MEFFORD CHEMICAL CO.
1026 Santa Fe Ave., Los Angeles 21, Calif.

ALBERT VERLEY AND CO., INC.
222 Front St., East, Toronto, Ontario

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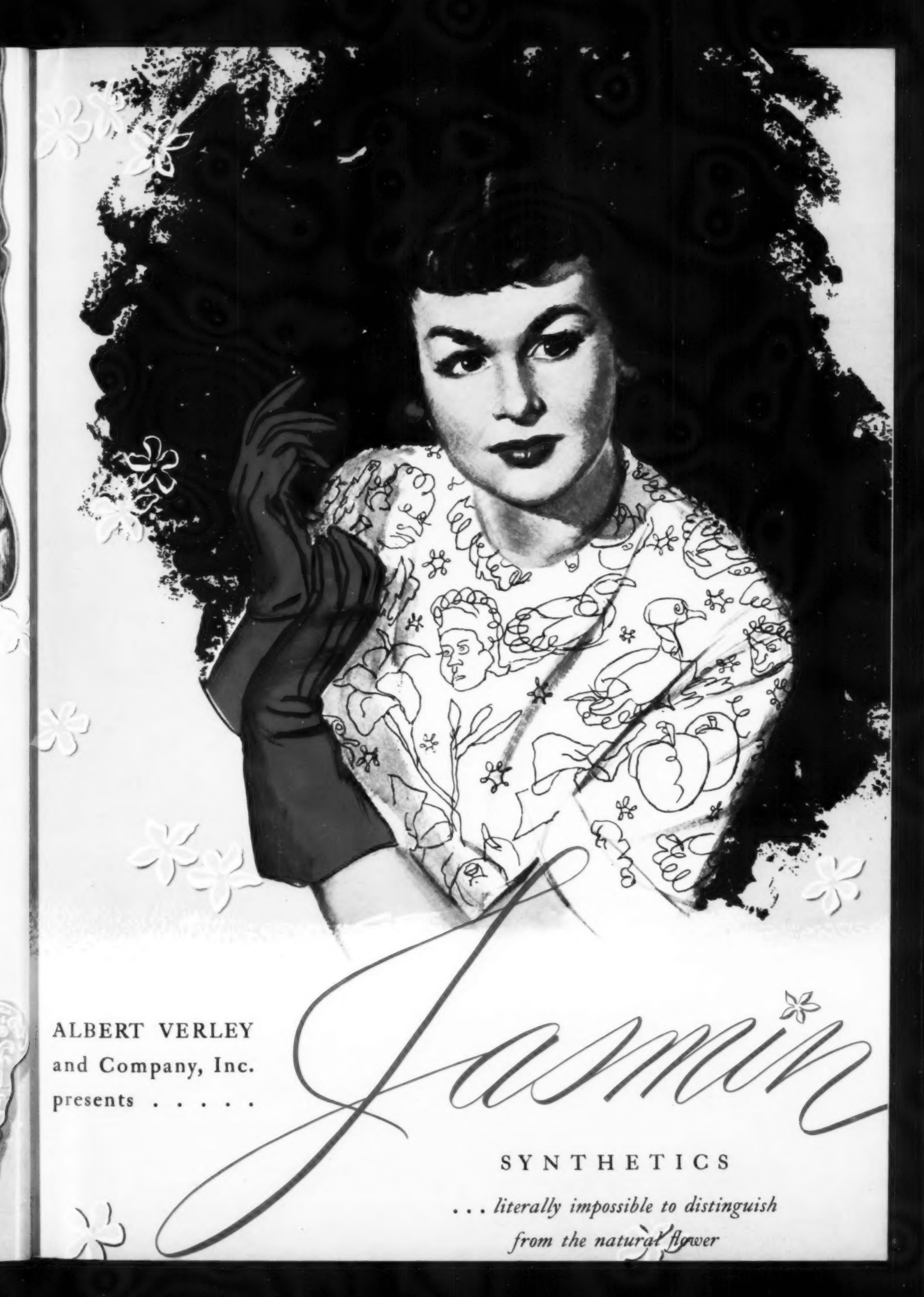
Albert Verley

AND COMPANY, Inc.

Headquarters for Odor Appeal

Synthetic Aromatic Products and Organic Isolates • Synthetic Flower Oils and Aromatic Bases • Bouquets and Finished Compositions


ALBERT VERLEY
and Company, Inc.
presents . . . . .
Jasmin
SYNTHETICS
. . . literally impossible to distinguish
from the natural flower

Jasmin

SYNTHETICS

by Albert Verley & Company, Inc.

reach new heights of fragrance and fidelity as substitutes, in part or whole, for the natural product

For many years, the development of Jasmin specialties and compositions has been a particular interest of the staff of Albert Verley & Company, Inc. A few of our materials are listed below — true similes of this essential flower. You can use them to match the fragrance of the natural product with uncanny fidelity — both in your Jasmin odors and for the Jasmin note indispensable in so many perfume compositions. And you enjoy important savings. These Jasmin developments deserve more than passing notice. Ask us for working sample and prices — or consult us in confidence regarding your individual problem.

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HOMO JASMONE JASMINTEME
JASMIN SUMMUS ALDEHYDE JASMINIQUE
JASMOGENE ALCOOL JASMINIQUE

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After Closing . . .

Revises Vaporizer Recommendations

A REVISED statement on the health hazards of insecticide vaporizers was issued late last month by the Interdepartmental Committee on Pest Control. The latest version is a revision of the original recommendations made by the Committee on Sept. 21, 1951. The committee is composed of representatives of the U. S. Department of Agriculture, Interior, Army, Navy, Airforce and Federal Security Agency (U. S. Public Health Service and Food and Drug Administration).

In a prefatory paragraph the release points out that "in consideration of additional data (the committee) has revised its release of Sept. 21, 1951, regarding the use of lindane, DDT or mixture of the two in insecticide vaporizers to read as follows:

1. The insecticide should be continuously released over a 24-hour period at the rate not to exceed 1 gram per 15,000 cubic feet per 24 hours. The dispensing rate per hour should not vary more than 25 percent. Devices should be so constructed that output in excess of that recommended is impossible.

2. Installation should be made only in commercial or industrial premises, and similar locations where human exposure will be on a working-day basis—not continuous.

3. The devices should not be used in homes or sleeping quarters.

4. Unless it can be demonstrated that contamination does not occur, the Committee recommends against the use of insecticide vaporizers in rooms or areas where food is served, processed or stored.

5. The Interdepartmental Committee has no evidence that other insecticides when used in vaporizers in space occupied by humans or where food is present are effective or safe."

Approved by the Committee
Washington, D. C.
October 22, 1952

H. L. Haller, Chairman, Interdepartmental Committee on Pest Control, Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture, Washington 25, D. C.

S. W. Simmons, Secretary, Interdepartmental Committee on Pest Control, Technical Developemnt Branch, Communicable Disease Center, U. S. Public Health Service, P. O. Box 769, Savannah, Georgia.

Form Whistleclean Corp.

Formation of Whistleclean Corp., to market "Whistleclean" industrial cleaners, detergents, disinfectants and insecticides was announced recently by L. Sonneborn Sons, Inc., New York. These products have been sold for nearly 50 years by American Oil & Disinfectant Corp., another Sonneborn subsidiary. Joseph A. Lichterman, former sales manager, has been named vice-president and general manager of the new corporation, which makes its headquarters at 80 Eighth Ave., New York. A service department, with headquarters in the Sonneborn factory in Nutley, N. J., has been set up to advise and assist industries in the solution of specialized cleaning problems.

Don Murphy a Vice-Pres.

Donald F. Murphy, assistant secretary of Rohm & Haas Co., Philadelphia, was recently elected a vice-president of the company. He joined the firm as an entomologist in the research laboratories following his graduation from Massachusetts Agricultural College in 1930. Later he was named head of the Rohm & Haas' entomology laboratory at Bristol, Pa. In June, 1943, he was appointed sales manager of the company's agricultural and sanitary chemicals department, and in recent years has, in addition, directed sales of its textile and export departments. In April, 1951, he was named assistant secretary of Rohm & Haas.

DONALD F. MURPHY

CSMA Luncheon Nov. 19

George Tompkins, sanitation director for Arnold Bakeries, Port Chester, N. Y., will be the guest speaker of the Wednesday, Nov. 19th monthly luncheon of the Chemical Specialties Manufacturers Assn. to be held at the Hotel Roosevelt, N. Y., at 12:30 p.m. He will discuss the sanitation problem of the bakery. There will be no monthly luncheon in December because of the annual meeting at the Hotel New Yorker, Dec. 7, 8 and 9.

E. D. Ingalls, chief maintenance engineer in charge of sanitation for the pharmaceutical plant of Hoffman LaRoche Co., Nutley, N. J., spoke at the Oct. luncheon. He described the methods of sanitation as practiced in a pharmaceutical plant. In discussing products used he mentioned that he had been unable by actual experience to find out what would be considered a "non-skid, non-slip and non-scuff floor wax."

Grimm Leaves Felton

Charles H. Grimm, for many years connected with Felton Chemical Co., Brooklyn, recently announced his resignation as manager of the essential oil division. His future plans are to be announced shortly.

Fritzsche Moves in Canada

Fritzsche Brothers of Canada, Ltd., Toronto, announced recently that they would shortly move into new quarters in a modern building now being erected at 81 Northline Road in the new East York industrial center. This will give the company considerably more space for its sales and administration offices and laboratories now located at 77 Jarvis St.

SAACI Sales Clinic

Nearly 300 members, non-members, students and guests attended the first chemical sales clinic sponsored by the Salesmen's Association of the American Chemical Industry, at the Hotel Commodore, New York, Oct. 28. The all-day session, which concluded with a reception and banquet, was addressed by Edward A. Bush of Aromatics Division, Dow Chemical Co., SAACI president, who welcomed the audience to the first sales clinic of the organization. Other speakers at the morning session included Ralph L. Ericsson, vice-president of Sumner Chemical Co., who was chairman of the committee in charge of the clinic. He discused "Why a Chemical Sales Clinic?". Also participating were Bert Cremers, vice-president of Michigan Alkali Divison, Wyandotte Chemicals Corp., Wyandotte, Mich., who spoke on "Selling Heavy Chemicals"; Charles P. Walker, Jr., general sales manager of Chas. Pfizer & Co., discussed "Selling Fine Chemicals" and Morris I. Pickus, president of the Personnel Institute, discussed the sales executive.

The luncheon speaker, Walter J. Murphy, editor of *Chemical and Engineering News* spoke on the "Salesmen's Place in the Chemical Industry."

The qualities and qualifications of a salesman were reviewed by Ollie F. Minor, sales manager of the New York division of Shell Oil Co. at the afternoon session. Other speakers included J. Hayden Twiss of the New York advertising agency bearing his name, who spoke on "Uses and Abuses of Chemical Advertising" and John D. McPherson, development manager of manufacturers chemicals department of American Cyanamid Co., who talked on "Uses and Abuses of Market Research". Three films: "The Radar of Selling"; "The Story of Research" and "How to Win an Argument without Arguing" concluded the afternoon program.

Sidney D. Kirkpatrick, vice-president of McGraw-Hill Book Co., as banquet speaker discussed selling by technically trained personnel.

CSMA Proceedings

The Proceedings of the 38th mid-year meeting of the Chemical Specialties Manufacturers Assn., held in Boston, last June, are now available from the association. The cost of the 175-page report of all papers and discussions at the meeting is $7.50 each for the U. S. Copies may be obtained by mailing checks to the Chemical Specialties Manufacturers Assn., 110 E. 42nd St., New York 17, N. Y.

Lueders Honors Weber

F. Weber, who celebrated his 60th anniversary with George Lueders & Co., New York, last month, was tendered a dinner at the Montauk Club, Brooklyn, by the officers and directors of the company. Edward V. Killeen, who has been with the firm 62 years, welcomed Mr. Weber into the 60-year category.

Part of the group attending the banquet concluding the one day sales clinic of SAACI.

SOCMA Meets Dec. 3

The annual business meeting of the Synthetic Organic Chemical Manufacturers Association of the U. S. will be held Wed., Dec. 3, at 5:15 p.m. at the Hotel Commodore, New York. A dinner follows the meeting.

Lever Research Center

Formal opening of the new research center of Lever Brothers Co., New York, at Edgewater, N. J., is scheduled to be held the morning of Tuesday, Nov. 18. The new center of all research and development activities of Lever is in the new laboratory and pilot plant at Edgewater, which is just across the Hudson River from 96th St., New York City. The bulk of Lever's research was formerly conducted at Cambridge, Mass., from which all of this work was moved recently.

Ungerer Golf Outing

I. H. Budd, vice-president of Ungerer & Co., New York, was the winner of that firm's president's trophy for having the lowest net score at the recent annual Ungerer golf outing at Essex Fells Country Club. F. F. Dittrich, controller, was runner up. Following the golf tournament the players met at Chez Charles restaurant in Totowa Boro, N. J. During the luncheon, K. G. Voorhees, Ungerer president, presented Mr. Budd with the President's Trophy, a sterling silver Revere bowl, which is awarded annually to the winner.

Wyandotte Advances Three

Michigan Alkali Division of Wyandotte Chemicals Corp., Wyandotte, Mich., recently announced the following advancements: M. J. Conway to manager of the central district; H. C. Brunner to manager of distributor sales; Bert McCord to sales representative, central district. These men will operate from the home office at Wyandotte. Their apopintments become effective January 1, 1953.

Mr. Conway is assuming charge of the newly created central district which covers the state of Michigan, northern Ohio, northern Indiana, western Pennsylvania, western New York and northern West Virginia. Manager of the Pittsburgh sales office since 1946, he has been with Wyandotte for the past 28 years.

Mr. Brunner has been with Wyandotte since 1930, and manager of the Detroit office for the last six years. In his new position he will administer all distributor sales and will develop and execute promotional programs related to distributors.

Mr. McCord will assist Mr. Conway as sales representative in the central district. Formerly he managed the Detroit sales office of the General Chemical Division of Allied Chemical & Dye Corp., New York.

Chicago Rat Drive Report

Chicago's current polio epidemic, involving 980 cases from Jan. 1 to October 1, has given new meaning to the municipal rat extermination drive launched in July under direction of the new city rat control officer, Arthur E. Marks. Reporting progress of his campaign, Mr. Marks said that in the first seven weeks 1,071 city blocks had been covered by his crews in six different congested areas. About 9,000 pounds of warfarin bait, 60,000 red squill baits and 400 pounds of cyanide gas had been used for treating alleys and public places, while several hundred poison bait boxes had been permanently placed. Inspectors checked 2,144 buildings and advised owners on rat proofing them while 26,000 new tight lidded garbage containers were ordered installed. The work will continue until the entire city is blanketed, Mr. Marks stated.

J. F. CORKILL

Corkill Borax Vice-Pres.

The appointment of J. F. Corkill, eastern manager of Pacific Coast Borax Co., Division of Borax Consolidated, Ltd., New York, as vice-president, was announced recently. Mr. Corkill joined the organization upon his graduation from the law school of the University of Southern California.

Can Co. Advances Two

The Central (Metal) Division of Continental Can Co., New York, recently announced two appointments in the Chicago office. W. B. Larkin has been named division manager of sales and P. L. Brachle has been appointed to Mr. Larkin's former post of sales manager, general line.

Polyglycol Esters Booklet

Polyethylene glycol fatty acid esters are described in a brochure recently issued by Kessler Chemical Co., Philadelphia. Their chemical and physical properties are listed. Individual esters are discussed with regard to uses and applications as wetting agents, emulsifying agents, oil soluble surface active agents, alone or as auxiliaries. Special suitability for use in various industries, such as shampoo formulation, waxes and polishes, creams and lotions, textile processing, etc., are discussed in some detail. A number of suggested formulations for these product groups are supplied.

New Perfumers Members

The regular quarterly business meeting of The American Society of Perfumers, Inc., was held at the Advertising Club, New York, recently. The following were elected into membership:—Philip E. Chaleyer, Ph. Chaleyer, Inc.; Walter Lengsfelder, Fleuroma, Inc.; Andrew B. Farago, Zanadu Mfg. Corp.; and Josephine Catapano, van Ameringen-Haebler, Inc., all of New York. Everett D. Kilmer, Edwin D. Morgan, Jr., and Skuli O. Bjornsson of Lever Brothers Co., Edgewater, N. J. Robert Matre, Hewitt Soap Co., Dayton, O.; Dr. H. K. McClain and Edward J. Matre of Procter & Gamble Co., Ivorydale, O.

The November 19th meeting will be an "open" meeting to which guests of members are invited.

Commercial Labs. List

American Council of Commercial Laboratories, Washington, D. C., recently issued the 1952 edition of its directory. Like its predecessors the current edition contains individual laboratory statements of organization, services, specialties, etc., which are alphabetically arranged, and a geographical cross index of laboratories.

New ADM Pension Plan

A pension program designed to provide retirement incomes for regular hourly employees of Archer-Daniels-Midland Co., Minneapolis, was approved at a recent stockholders' meeting. The entire cost of the program will be paid by the company. To be eligible, an employee must have completed a minimum of 15 years of service with the company before reaching the age of 65, the company's normal retirement age. Size of the monthly pension is based on an amount equal to $5.00 for each year of service with the firm. Maximum monthly payments are $125, less benefits from other retirement programs to which the company contributes. The program provides additional income for employees who work beyond the normal retirement age. These pensions may run as high as $150 a month.

Shifts Sales Staff

Appointment of George Blizzard as manager of the northern sales region has been announced recently by Boyle-Midway, Inc., New York. The region comprises portions of Ohio, Indiana, Michigan, Pennsylvania, West Virginia, and New York. Mr. Blizzard is making his headquarters in Cleveland as did Cliff S. Stoeckle, whom he succeeds. Mr. Blizzard joined the Boyle-Midway sales force in 1939, and became New York division manager in 1944.

Jerry Bastien, formerly a member of the west coast sales force has been named head of the company's New York sales division in succession to Mr. Blizzard.

Onyx Has New Quaternaries

Two new quaternary ammonium salts have been announced recently by the industrial division of Onyx Oil & Chemical Co., Jersey City, N. J. According to Onyx they are closely related to "Onyx BTC," alkyl dimethyl benzyl ammonium chloride, but have higher phenol coefficients and other advantages. "BTC 471" is an alkyl dimethyl ethylbenzyl ammonium chloride. It is supplied in 50 percent aqueous solution, but may also be had in an 82.5 percent alcoholic solution. "BTC 927" is an alkyl dimethyl dimethylbenzyl ammonium chloride. It is supplied in a 50 percent aqueous solution. The manufacturer claims superior wetting action for both these products. Detailed technical data are available on request.

Community Aide

Neil McElroy, president of Procter & Gamble Co., Cincinnati, presided over the rally marking the opening of the 1952-53 Community Chest campaign in Cincinnati. Mr. McElroy is co-chairman of the drive.

N. E. Oil Chemists' Debate

A debate on the subject of "Soaps vs. Synthetic Detergents" will be the feature of the Dec. 1 meeting of the Northeast Oil Chemists' Society, to be held at 6:30 p.m. at the Military Park Hotel, 16 Park Place, Newark, N. J. John W. McCutcheon, New York consultant and author, will argue for the synthetics, while Foster D. Snell, head of the New York research laboratories bearing his name, will state the case for soap.

Hans Stauffer V. Pres.

Hans Stauffer, vice-president and general manager since 1941 of Stauffer Chemical Co., New York, recently was appointed executive vice-president.

HANS STAUFFER

Forms New Company

Edward G. Brown recently announced formation of Brown Chemicals Co., 15 Moore Street, New York 4, Whitehall 3-0960. The new company will engage in manufacturing, chemical processing, importing, and distributing of vegetable oils and vegetable oils specialties.

Caples Speaks in Chicago

William G. Caples, president of Inland Steel Container Co., Chicago, was principal speaker at the fall dinner meeting of the Industrial Management Forum, held in Chicago, recently. His subject was "Management's Part in the Preservation of our Free Enterprise System."

Ungerer Names Dittrich

Appointment of F. F. Dittrich as controller of Ungerer & Co., New York, was announced recently by K. G. Voorhees, president and treasurer, following a meeting of the board. Mr. Dittrich has been associated with Ungerer since January, 1942. He is a graduate of New York University and attended its post-graduate School of Finance.

Continental Names Two

The Eastern (Metal) Division of Continental Can Co., New York, recently announced the creation of two new general manager posts, each carrying full responsibility within a given district. Lenvik Ylvisaker, formerly manager of the firm's Pittsbugh plant, has been appointed general manager of the northeastern district. Wilbur K. Neuman is now general manager of the southeastern district. He was previously director of product sales.

Sanitation Managemt. Assn.

William Whitten, Lederle Laboratories Division, American Cyanamid Co., Pearl River, N. Y., was recently elected first president of the newly formed Industrial Sanitation Management Association, at the group's initial meeting at the Hotel Governor Clinton, New York. The purpose of the organization is the promotion of the interchange of ideas among persons charged with the responsibility of administering sanitation programs in industry. An annual meeting is planned to be held in conjunction with the Plant Maintenance Conference and Show, at the Public Auditorium in Cleveland, Jan. 19-22.

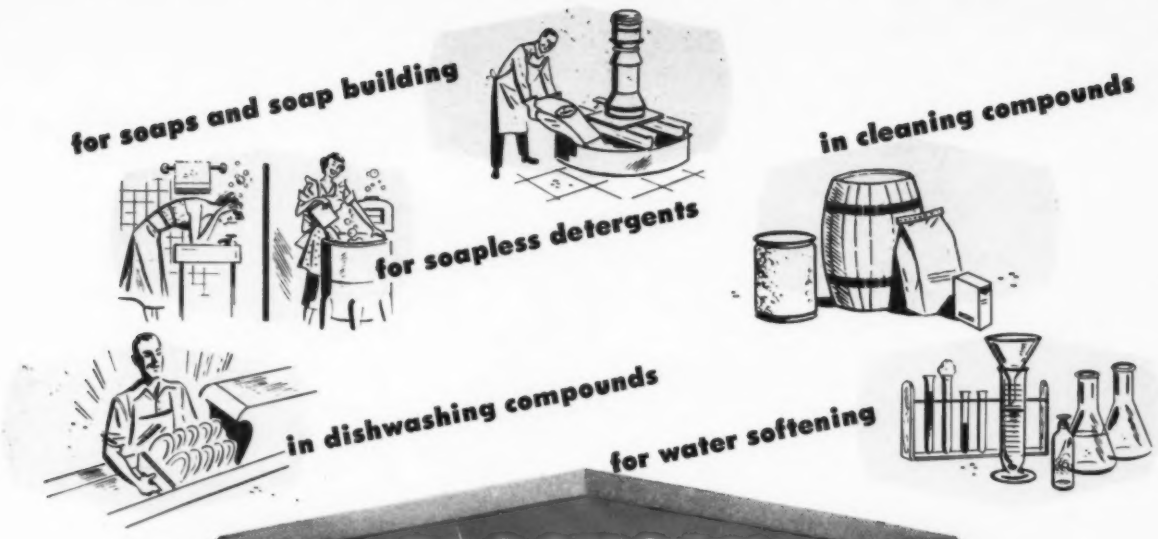
Other officers elected at the meeting were: J. Lloyd Barron, National Biscuit Co., New York, vice-president; William Libbey, Whitin Machine Works, Whitinsville, Mass., treasurer, and James V. Cawley, editor of *Modern Sanitation*, secretary.

Named Canco Director

American Can Co., New York, recently announced election of Donald B. Kipp, member of the law firm of Pitney, Hardin & Ward, Newark, N. J., as a director. Mr. Kipp, a graduate of Princeton University and Harvard Law School, also is a director of American Colortype Co.

Mowry in New Post

Monsanto Chemical Co., St. Louis, Mo., recently announced the transfer of Dr. David T. Mowry of Dayton, O., to the development department of the firm's phosphate division. Mr. Mowry has been with Monsanto since 1941.



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Sodium Phosphates

Blockson has made substantial plant additions in its endeavor to keep up with the increasing demand for its SODIUM TRIPOLYPHOSPHATE, TETRASODIUM PYROPHOSPHATE, TRISODIUM PHOSPHATE and for its SODIUM POLYPHOS which is the Blockson brand name for a water soluble, Glassy Sodium Phosphate with the desirable characteristics of Sodium Hexametaphosphate and Sodium Tetraphosphate.

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- Tetrasodium Pyrophosphate, Anhydrous
- Sodium Polyphos (Sodium Hexametaphosphate) (Sodium Tetraphosphate)
- Trisodium Phosphate, Crystalline
- Chlorinated Trisodium Phosphate
- Trisodium Phosphate, Monohydrate
- Disodium Phosphate, Anhydrous
- Disodium Phosphate, Crystalline
- Monosodium Phosphate, Anhydrous
- Monosodium Phosphate, Monohydrate
- Sodium Acid Pyrophosphate
- Sodium Silicofluoride
- Sodium Fluoride
- Hygrade Fertilizer

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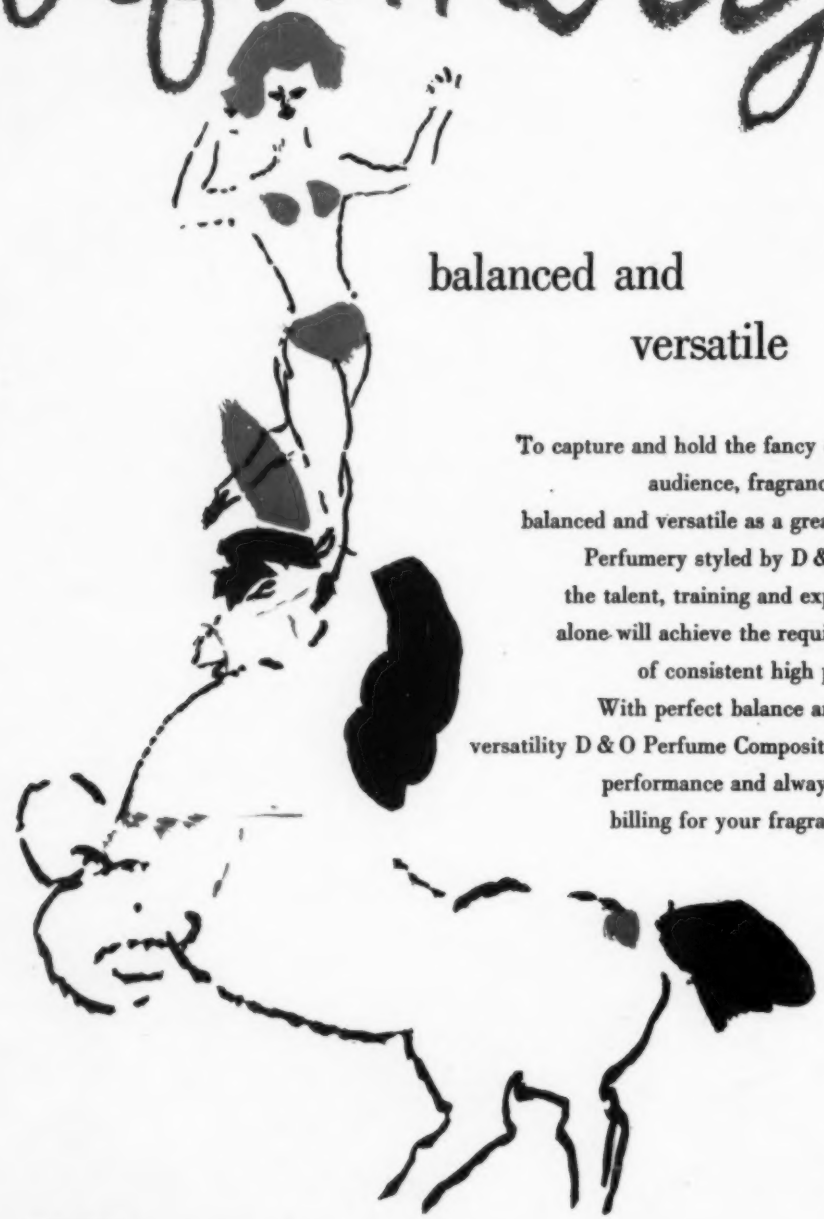

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The added safety of waxes containing "Ludox" can mean greatly increased sales for you. Another big selling feature is their extra hardness. And along with these outstanding advantages, all the basic qualities of gloss, water-resistance, freeze-resistance and leveling are maintained in properly formulated waxes.

Today, there is a variety of anti-slip waxes made with "Ludox." A continually increasing number of safety and sanitation engineers are specifying them for business, industry, and institutions.

Check up on the growing demand for anti-slip waxes with "Ludox." Ask your wax supplier about them. Or if you want to manufacture a wax made with "Ludox," write for technical information. E. I. du Pont de Nemours & Co. (Inc.), Grasselli Chemicals Dept., 4147-C Du Pont Bldg., Wilmington 98, Delaware.

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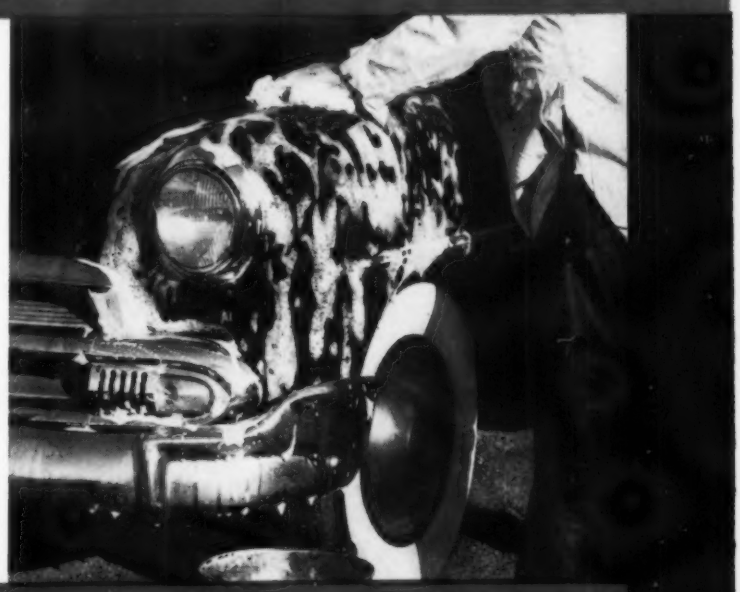

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Beyond its physical form and appearance, ULTRAWET SK is an ideal product for merchandising because of its performance characteristics. It is instantly soluble in water—hot or cold, soft or hard —to form copious quantities of suds. Its free rinsing properties eliminate scum which causes streaking and dulls colors. Its low alkalinity assures the minimum effect on painted and waxed surfaces or on the most delicate fabrics.

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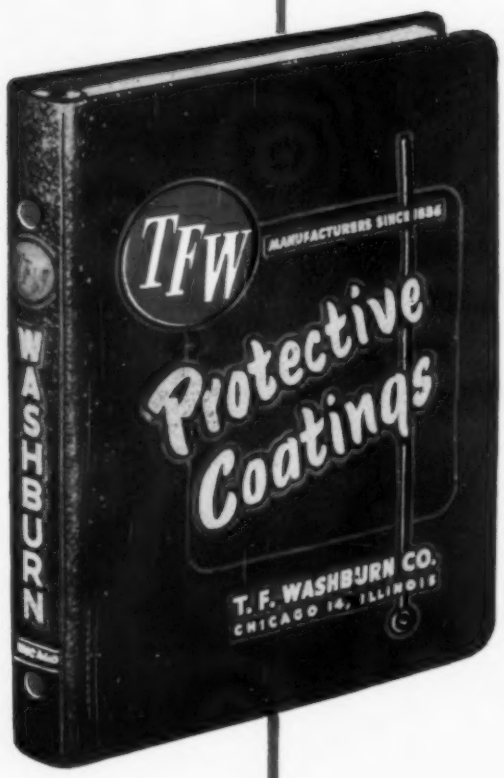

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amazingly free-flowing

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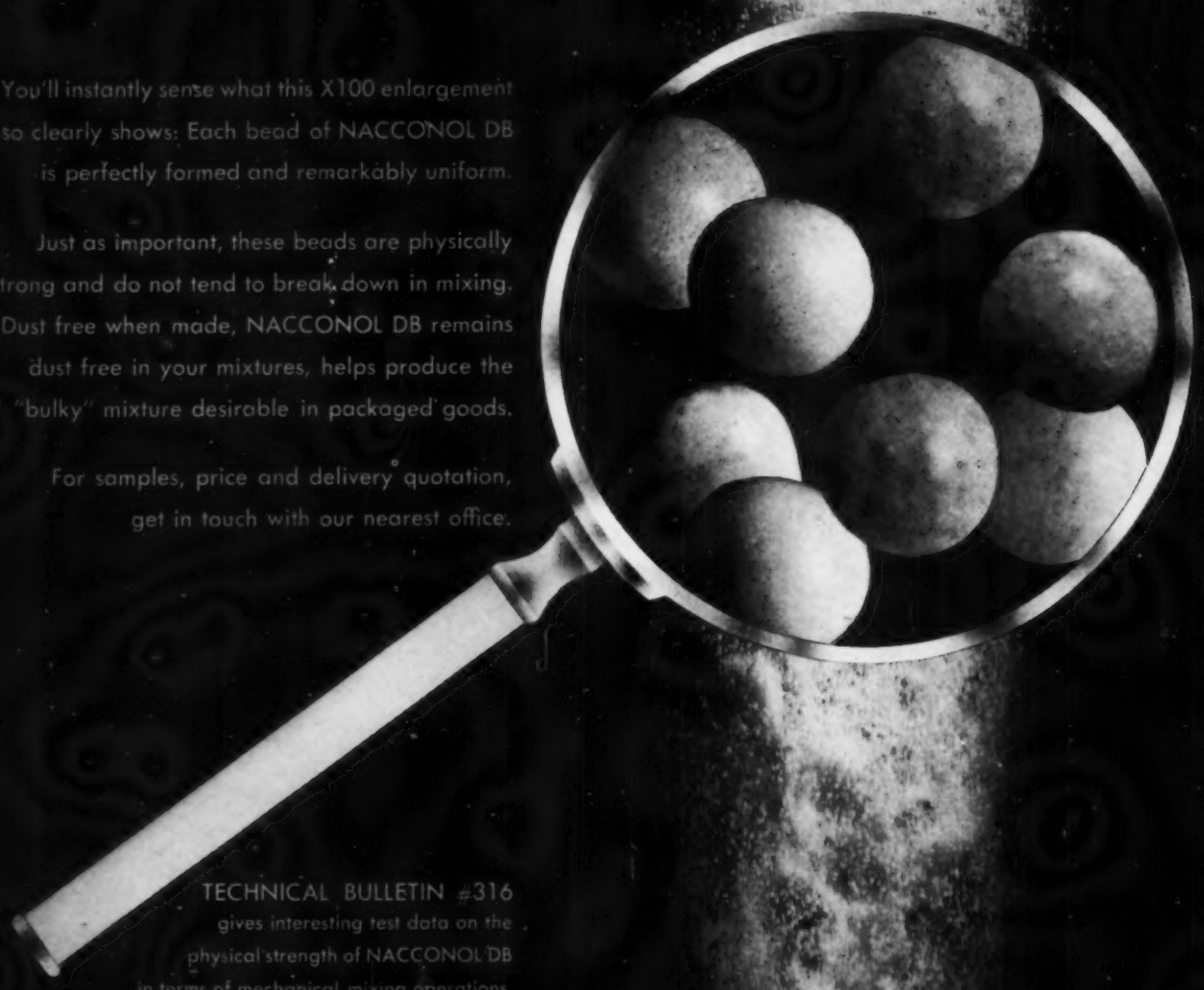
AMERICA'S LEADING SYNTHETIC DETERGENT

You'll instantly sense what this X100 enlargement so clearly shows: Each bead of NACCONOL DB is perfectly formed and remarkably uniform.

Just as important, these beads are physically strong and do not tend to break down in mixing. Dust free when made, NACCONOL DB remains dust free in your mixtures, helps produce the "bulky" mixture desirable in packaged goods.

For samples, price and delivery quotation, get in touch with our nearest office.



TECHNICAL BULLETIN #316 gives interesting test data on the physical strength of NACCONOL DB in terms of mechanical mixing operations. Get your copy from our nearest office.

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Select the proper Emery Vegetable Type Fatty Acid for your needs!

PRODUCT	Titer °C	Iodine Value Wijs	Max. Lovibond Color 5¼" cell	Acid Value	Sap. Value
Emery 600 Distilled Cottonseed Type	34-38	90-110	30Y/15R	197-203	199-205
Emery 610 Distilled Soya Type	24-29	120-125	30Y/8R	195-203	197-205
Emery 614 Distilled Soya Type-Alkyd Grade	18-23	125-130	20Y/5R	193-201	195-203
Emery 618 Dist. Soya Type-Super Alkyd Grade	18-23	135-140	20Y/5R	195-201	197-203
Emery 621 Distilled Coconut Type	22-26	8-18	30Y/6R	255-266	257-268
Emery 622 Double Distilled Coconut Type	22-26	8-15	10Y/2.5R	258-270	260-272
Emery 630 Distilled Corn Type	28-33	105-120	30Y/10R	195-201	197-203
Emery 640 Distilled Palm Type	43-46	45-55	35Y/15R	199-205	201-207

Emery

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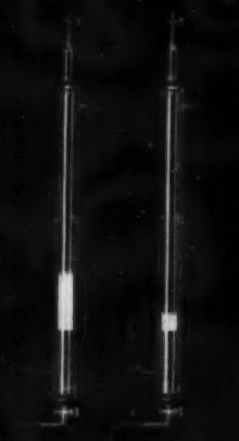
ROSS-MILES FOAM TEST

Higher foaming of NINEX 21 Versus an ordinary alkyl aryl sulfonate in the presence of oil



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NINEX 21

In clear water, many of the sulfonated detergents on the market produce good foam. But they all tend to collapse rapidly in the presence of grease or other soils.

NINOL, the originators and oldest manufacturers of alkylolamides (amine condensates), has for some time been carrying out protracted research into the known foam-stabilizing properties of certain amides.

Now, the results of this research have made possible the announcement of NINEX 21, in which a new and highly effective stabilizing amide is combined with one of NINOL's new sulfonates. This makes available to you a 60% active liquid detergent having excellent foam stability and cleansing action, at remarkably low cost.

Used at full strength, or cut back with several volumes of water, NINEX 21 is the outstanding product for *liquid dishwashing, car washing, bubble baths* or any other application where copious foam is desired.

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NINOL 128 For low priced viscous nonionic bar glass cleaners; also viscous detergent sanitizers.

NINOL AA62 For stabilizing foam of alkyl aryl sulfonates.

NINOL HA10 For water-in-oil emulsions such as absorption bases, dry cleaning detergents, etc.

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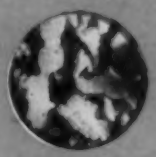
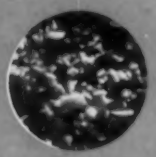
Whether you prepare specialty compounds, produce cleansers or re-package, you should investigate D-40. Write or telephone the Oronite office nearest you for full information.

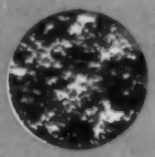
Photographs show D-40 particle sizes enlarged 5 times.



D-40SF (Flakes)



D-40 (Granules)



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GLOSS (After buffing)	E	ANTI-SLIP	E
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- ☐ Cedarwood
- ☐ Cherry Laurel
- ☐ Cinnamon
- ☐ Citronella
- ☐ Clove
- ☐ Copaiba
- ☐ Coriander
- ☐ Eucalyptus
- ☐ Geranium
- ☐ Grapefruit
- ☐ Guaiacwood
- ☐ Labdanum
- ☐ Lavandin
- ☐ Lavender
- ☐ Lemon
- ☐ Lemongrass
- ☐ Limes
- ☐ Orange
- ☐ Patchouly
- ☐ Peppermint
- ☐ Petitgrain
- ☐ Pimenta
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- ☐ Sage
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R. A. JONES & COMPANY, INC.

Cartoning Machines — Soap Presses

P. O. BOX 485, CINCINNATI, OHIO

SOAP INVENTORIES . . . Off hand, we should guess that more soap has been used during the past six months than has been bought. Among converters, large industrial users and smaller consumers, we hazard a guess that inventories are down. As long as tallow and grease prices stand at a low ebb and the inclination of bulk suppliers is not to raise prices, inventories among soap users will stay down. But soap buyers might look the facts in the face. The chances of soap prices going too much lower are slim indeed. If there is any material move from present levels, it has to be upward, as we see it. Those who know that they will require a considerable tonnage of soap over the next six months cannot go too far off base in anticipating some of those needs under present conditions which, if all the facts are analyzed, must be considered advantageous.

•

STILL UNSOLD . . . In a recent address before a Chemical Specialties Manufacturers Association luncheon, E. D. Ingalls, sanitation director for one of the world's largest pharmaceutical manufacturers, outlined his plant maintenance problems and the methods and materials used to solve them. He emphasized the necessity for scrupulous sanitation and the pains to which they go to attain this end. However, we seemed to read between the lines that he is not fully sold on many of the products which he uses in numerous and intricate maintenance tasks. Subsequent questions from his listeners quite generally confirmed this view.

Mr. Ingalls is not alone among sanitation directors who remain unsold on the rank and file of sanitation chemicals which are offered to them almost daily. In fact, among sanitation directors of larger firms, he is very much in the majority. These men simply have never been sold. Why? Products, sales methods, or both? It is a serious question, probably the largest obstacle along the road to broader sales for the whole industry. Why not really dig into this entire problem and get at the truth, and quit kidding ourselves? A real answer well could open the path to doubled or tripled business over the next decade. But we will not get it by patting ourselves on the back and telling each other how wonderful we are!

•

MARKET STUDIES . . . With keen and unusual interest we note that "brand loyalty is low among buyers of soaps and sudsers." This is according to Dr. George H. Brown of the University of Chicago. Just what is "brand loyalty?" As we see it, just a lot of fluff and nonsense. Brand loyalty, if there be any such animal, which we doubt, is just another name for buying the same well-known, branded product because it may have proved to be a good product through experience. But never have we observed so-called "loyalty" to any product simply because of its brand, all check and random counts to the contrary not withstanding.

Actually, branded products as a rule are better. They have to be. No manufacturer with a million dollars or more invested in any brand is dope enough to permit its quality to fall to a point where the "loyalty" of its users may decline seriously. The real answer is that Americans are swayed by advertising, and when advertising expenditures are up, strangely "brand loyalty" is up. We suggest to Dr. Brown that he get himself a job in a supermarket as a spotter or as a clerk in a busy grocery,—not for two or three hours, but for six or seven months,—and give this "brand loyalty" thing a real good look from the cold, practical side.

Dr. Brown published his findings in a recent

issue of *Advertising Age*. At best, they could have been so infinitesimal in comparison to the full American market as to be either useless or misleading. Brand loyalty, dear doctor, is a figment of your imagination! Brands are bought because they are better and continue to be better, —and because through continuous advertising, people are never allowed to forget this fact. But, let this combination break down and good-bye "brand loyalty!"

●

FAT AND OILS . . . Production of fats and oils for 1952-53 will probably approximate the record production of the previous fiscal year, according to Department of Agriculture estimates. Actual "disappearance," which in effect is consumption, is expected to be equal or greater than 1951-52. Very probably it will be greater. Whereas a year ago, prices were declining sharply, the present outlook is for some increases, if nothing else a rebound from bottom levels. Cost calculations of fat derivatives, including soaps, should anticipate the possibility of higher prices over the next three months at least. After that, it's anybody's guess.

●

PACKAGING . . . Revolution in marketing and packaging of soaps, detergents and household chemical specialties is keeping pace every step of the way with almost constant change in product formulation. The modern gleaming supermarket has brought far-reaching changes in packaging which a half-century of marketing through the old-fashioned general store and independent grocery never found imperative.

At the recent meeting of the National Association of Food Chains, head of one of the leading supermarket chains predicted that 1953 "will bring the fastest rate of expansion experienced in the chain supermarket industry . . . " To get a share of the estimated one billion two hundred million dollars done by member chains in supermarkets to be opened next year, manufacturers of soaps and detergents and household chemical specialty products will engage in the most competitive sales, advertising and promotion efforts ever experienced by these industries. All of these efforts will go for naught unless the consumer in the self-service supermarket is impressed favorably by the package looking out from the shelf.

Change in package design is the order of the day, and old well-known labels and names will no longer sell unless they are quickly seen, easily read and attractive to the eye. That many changes have and are taking place in packaging, with new and improved package materials being introduced all the time, can be gleaned from new household products featured regularly in our pages. Restyling of packages is a trend that manufacturers of household chemicals must be concerned with,—that is if they wish to stay in the parade and continue to have their goods sold by these modern retail outlets.

●

VAPORIZERS . . . A revised statement covering health hazards of insecticide vaporizers was issued on October 22 to supersede its original release of a year ago by the Interdepartmental Committee on Pest Control. The new release in addition to limiting the rate of lindane vaporization, recommending against use in homes or sleeping quarters, or prolonged or continuous use elsewhere,—all of which were covered in the original release,—is far more drastic. It recommends against use of vaporizers in rooms where food is served, processed or stored "unless it can be demonstrated that contamination does not occur." It states also that "the Interdepartmental Committee has no evidence that other insecticides when used in vaporizers in space occupied by humans or where food is present are effective or safe."

The new statement omits reference to need for a fuse, which protects against excessive lindane vaporization caused by electrical overloading or thermostat failure.

In a nutshell, this latest statement of the Interdepartmental Committee puts the "bee" directly on the vaporizer manufacturers. It means that these manufacturers must find out and prove what their machines will and will not do, how safe they are or are not, and how effective they are in controlling flying insects. The buck has been passed to the device manufacturers.

Obviously, a lot of research will be needed by most manufacturers. Still others, as we see it, may as well fold their tents and prepare to depart,—or completely revamp their devices.

as the reader sees it . . .

Hygiene Status Clarified

Editor:

We are distressed to see the paragraph with reference to Hygiene Products contained on page 183 of your October issue of Soap and Sanitary Chemicals.

You have been completely misinformed in this respect and we would like to point out that the company today is in a stronger position than it has been for many years past and it intends to continue on this basis.

We would certainly appreciate your taking the necessary steps to retract.

Your consideration in this manner would be greatly appreciated.

D. L. deVolpi,
president
Hygiene Products, Limited

* * *

We regret our handling of the news item referred to by Mr. deVolpi. What actually happened was that the firm submitted a proposal for reorganization under the Bankruptcy Act of 1949, offered to settle unsecured claims of approximately $144,000 on the basis of 35 cents on the dollar. The proposal was voted by a majority of the creditors at a recent meeting and ratified by the Court.—Ed.

—— ♦ ——

Seeks Airplane Cleaner

Editor:

We are prompted to seek your aid in the solution of a problem confronting us in connection with that section of our business manufacturing sanitizing and cleaning compounds. The problem is the cleansing of the "interiors" of commercial passenger aircraft where deposition has occurred (mostly from the effects of passengers smoking) on both the aluminum frames and also on the fabric roofings. In the main, the deposits seem to be a nicotine tar which is very difficult to remove.

It occurs to us that this problem would have no doubt been satisfactorily solved in America, and we are desirous of securing a formula. Alternatively, should there be a well established line on your market made for this specific purpose, we would be prepared to manufacture, if necessary —under license.

We will await your reply with interest.

R. Wellstead,
W. K. Burnside Pty. Ltd.
Melbourne, Australia

* * *

We are checking to determine what manufacturers in the U. S. recommend for the purpose. If they have any suggestions, let us know.—Ed.

—— ♦ ——

Competition, Please Note

Editor:

It has been brought to the attention of this office that in the September issue of your magazine you published a rather damaging article about our product, "Dip-N-Rinse," which was withdrawn from the California market in accordance with instructions from the California State Board of Pharmacy. Every other statement contained in your article is false, as it is all right with the Board of Pharmacy to sell cleansers of this type if properly labeled according to California standards.

The California situation was indeed unfortunate, unscrupulous competitors have spread false tales and have reached into high places in the various state governments to prevent this company from selling in the states where they have proper official connections. However, we are pleased to report that we are now marketing a liquid silver cleaner that is non-toxic in nature and are effectively combating unscrupulous competitors by depriving them of sales from consumer acceptance of our product.

This firm is the largest manufacturer of liquid domestic silver cleaners, and we expect to become the largest manufacturer of liquid silver cleaner in the United States within the next year or so. Doubtless you see why our competitors are extremely worried about this growing company.

Trusting that you will see fit to make any necessary adjustments.

W. G. Stacy
General Manager
Bellaire Products, Inc.

* * *

We think Mr. Stacy's quarrel is with the California Board of Pharmacy, which is credited with the statements upon which our news item was based.—Ed.

—— ♦ ——

Seeing Double

Editor:

That new Hyman fungicide sure must be hot stuff. You announced it twice in the October issue of Soap.

I came across it first in the green pages entitled "After Closing ——" and later on it showed up on page 161. Careful comparison proves that the article written before closing is identical to the one after closing, so evidently the fungicide didn't improve with the passage of time.

Earl Brenn,
Vice-President,
Huntington Laboratories, Inc.

* * *

No wonder the Brenn's are such wonderful gin rummy players—they have such sharp eyes.—Ed.

—— ♦ ——

Schmidt to Marman

Editor:

In your September 1952 edition, page 69, you printed an article in reference to H. R. Schmidt leaving the Allen B. Wrisley Company of Chicago. We are surprised to note the article did not mention that Mr. Schmidt left the Wrisley Company to become general sales manager of Marman Soap Company, Inc. of Milwaukee, Wisconsin. The Marman Soap Company are prime manufacturers of all types of industrial and laundry purpose soaps.

Marman Soap Company, Inc.
Marshall J. Palakow,

* * *

We would have been delighted to mention Mr. Schmidt's new connection, if he or Marman Soap Co. had let us know about it.—Ed.

Antiseptic

By M. Martin Maglio

Vestal Laboratories, Inc.,

DURING the last twenty-five years, the safety and medical directors of industrial plants, as well as other managerial personnel responsible for plant operation, have become acutely aware of a need for combatting dermatitis and similar occupational hazards. One means of so doing is providing employees with an industrial skin cleanser which not only removes soil from the skin, but, at the same time, leaves it in such condition that it is not prone to irritation and dermatitis, with attendant lost man hours.

In the last two decades, industrial skin cleansers have changed in composition from very harsh, abrasive products to, in some cases, mild, carefully formulated, efficient products which are not only non-irritating in themselves, but to which have been added skin conditioning agents or emollients to replace the natural skin oils which may have been removed either through work or washing. While these products are a very great improvement over their predecessors, there is, of course, room for improvement in both their efficiency and skin conditioning properties. It is conceivable that this skin conditioning might well include protection against bacteria in addition to providing the emollient materials needed to avoid skin dryness.

The great impetus to the development of germicidal soaps during the last ten years has had its impact on industrial skin cleaners and the desirability of incorporation of antiseptic properties in these hand soaps has been recognized. In this manner, the industrial worker might have the additional protection of a low bacterial level on the skin, thus making him less prone to infection as a result of scratches or abrasions occurring either at work or home.

The development of antiseptic soaps, both bar and liquid, has reached a relatively high level of attainment. While the effects obtained by washing regularly with these products have been quite thoroughly covered in the literature, (1, 5-7, 11-15), it is desirable to review these briefly in order to provide a background for this study of the properties exhibited by powdered antiseptic skin cleansers.

It has long been established that ordinary soap is capable of removing "transient" bacteria* and a small part of the "resident" bacteria* from the skin. This removal is primarily mechanical and not bactericidal. (2, 8) The regular use of a bar soap containing 2% hexachlorophene** produces a marked reduction in the "resident" bacterial population. (11, 14) Liquid soaps containing 2% hexachlorophene (of their soap content) have been shown to be much more efficient than bar soaps in reducing the bacterial level on the skin. (12) Careful washing without a brush with these liquid antiseptic soaps has replaced the conventional 10-minute scrub with a brush in the surgical wash to prepare the surgeons' hands (12), as well as for use as a preoperative bacteriostatic wash in the preparation of the patient. (4) These clinical studies of the repeated use of hexachlorophene soaps have shown no tendency for these products to pro-

* "Transients," according to Price, are those bacteria and fungi which come to rest on the skin but are incapable of remaining there permanently; the "residents" are the normal flora of deeper layers of the skin and are removed only with difficulty.

** Also known as compound "G-11," trademark, Sindar Corporation, New York, N. Y.

Skin Cleansers

and John M. Hannegan

St. Louis

duce irritation of the skin. (3, 12-15) Discontinuance of the "G-11" soap results in the skin's gradual return to its normal level, usually within about a week. Some bacteriostatic protection is afforded for several days after discontinuing the soap's use (2, 3), so that protection over the two-day week end is provided for persons who wash with these soaps consistently during the week's five working days.

The maintenance of this remarkable bacterial reduction by the regular use of these antiseptic soaps made the development of a powdered antiseptic skin cleanser for industrial use very desirable, as it provides bacteriostatic protection heretofore lacking in such products.

Schwartz (9) in 1942 set up, and in 1949 revised, (10) a series of standards for an industrial skin cleanser. These standards require that:

(a) It should be freely soluble in hard, soft, cold or hot water;
(b) It should be agreeable to use;
(c) It should remove foreign soil from the skin without defatting the latter;
(d) It should not harm the skin when used with moderation;
(e) It should not contain harsh abrasives;
(f) It should not be highly alkaline (above pH of 10.5);
(g) It should flow easily through dispensers;
(h) It should not deteriorate nor become insect infested; and
(i) It should not clog plumbing.

With these points in mind, a modern type industrial powdered skin cleanser, which meets Schwartz's standards, was prepared with and without the incorporation of germicide so that its effect on the flora of the skin could be evaluated and compared with the effects obtained by washing with ordinary bar soap and with liquid antiseptic soap.

Experimental

Products Studied

AN ANTISEPTIC powdered industrial skin cleanser was prepared having the following composition:

41.50%	Organic scrubber
8.75%	Water softeners and detergent salts
31.00%	Soap
1.75%	Emollients
0.65%	VL-1* (or 0.65% G-11)
13.40%	Diatomaceous earth
3.00%	Moisture

A control powdered skin cleanser was prepared which was a duplicate in every respect except for the germicide.

The bar soap used in the control tests was that variety of toilet soap normally used by the particular subject in his home washings. The liquid antiseptic soap employed as standard in our first de-germing series was a special liquid hospital soap** containing 0.75% hexachlorophene (2% of soap content), diluted 1:2 with water. This soap was chosen since it is in actual use as the standard liquid antiseptic soap in over 2,500 hospitals.

Washing Procedure

Every effort was made to maintain constant and comparable washing procedures throughout our experiments. Tap water was run over the hands to a point about one inch above the wrist and the powdered soap (approximately 1.2 grams) was taken from the dispenser. A lather was worked up as the hands were scrubbed (no brush) for 40 seconds, no water being added other than that necessary to work up the lather. The hands were then rinsed with tap water (5 seconds) and the operation repeated with another 1.2 grams of soap so that the total elapsed time, except for the second rinse, was 90 seconds. This complete wash was repeated twice at spaced intervals during the day, making a total of three daily washes for the 5 working days of the week. Unmedicated bar soap was used over the two-day week end.

A similar washing procedure was used for the control bar soap and for the liquid antiseptic soap series.

Determination of Bacterial Count

Price, working on skin sterilization, developed (8) a multiple-basin handwashing technique, useful for studying the bacterial flora of normal skin. The procedure was based on his findings that, if a series of basins is used and the hands and arms are scrubbed in a uniform manner (up to the elbow) in each basin for the same length of time, the flora of the skin will be reduced at a constantly diminishing rate. The bacterial counts, obtained by plating the rinsings, produce a logarithmic curve, revealing "these reductions per successive basin to be in the order of a definite proportion." Other experimenters, including Traub et al. (14), Seastone (11), Udinsky (15), Cade (2) and Maglio, Pollmann and Pollnow (7), have developed modifications of the Price method, basically the multiple-basin technique with changes in the number of basins, time of washing, area of washing, intermittent use of antiseptic soap, etc.

The method used in this investigation is essentially that of Cade (2). Three basins are used equivalent to the 1st, 4th and 5th basin of the Price series. Each basin contains 2,000 ml. of sterile water. The hands are moistened to one inch above the wrist line and "Ivory" soap is applied for 15 seconds, followed by a thorough lathering and washing for 60 seconds. If additional water is required to moisten the hands, it is taken from

* 2,2'-Dihydroxy-3,5,3',5'-tetrachloro-diphenylmethane.
** Septisol, trademark, Vestal, Inc., St. Louis, Mo.

the basin. The hands are rinsed thoroughly in the basin for 15 seconds or a total elapsed time of 90 seconds. All droppings and rinsings are collected in the basin.

The hands are then rinsed off lightly in running luke-warm tap water, discarding the rinsing. Two more washings, each for 90 seconds, are carried out successively under the tap, but the water therefrom is not collected or tested. For these two washings the area covered should extend three-quarters of the way up the arm toward the elbow.

The first 90-second wash described immediately above for basin No. 1 is repeated in Basins No. 4 and No. 5.

Immediately after the subject has finished washing and rinsing in each of the basins, the wash water in each basin is thoroughly agitated and 1.0-ml. and 0.1-ml. samples are removed and each placed in a separate sterile petri dish, and 15 ml. of nutrient agar at 45° added (no serum was added to the plates as the VL-1 and hexachlorophene concentrations were below the bacteriostatic level for each of these germicides).* The sample and agar in the petri dish were agitated gently to disperse the organisms and the medium then allowed to solidify. The plates were next incubated at 37° for 48 hours. At the end of this time the number of colonies present was determined by means of a Quebec colony counter. The counts thus obtained are multiplied by 2,000 for the 1.0-ml. samples and by 20,000 for the 0.1-ml. samples to obtain the total basin count.

Results

THE results obtained for each of the basins in a control series with ordinary bar soap, for another control series with the unmedicated powdered skin cleanser, and for the series with the powdered antiseptic skin cleanser are plotted in Figure I. The standard curve obtained for regular use of "Septisol" (1), diluted 1:2 with water, is also shown for comparison. The actual data from which these

* In another series duplicate determinations were made with plates containing unpasteurized aseptic horse serum. No significant difference in bacterial count was observed between those plates which contained the horse serum and the corresponding plates which did not.

Table I

Bacterial Counts: Control Series With Ordinary Bar Soap

7 Subjects; Used Normal Routine With Soap of Their Choice; Determinations Made for Basins #1, #4, and #5. Counts to Be Multiplied by 1000.

	4th Day			5th Day			Averages			Average of 3
Subjects	Basin #1	Basin #4	Basin #5	Basin #1	Basin #4	Basin #5	#1	#4	#5	Basins
A	1750	1585	1140	4850	3390	2470	3300	2488	1805	2531
B	1240	280	310	540	195	150	890	238	230	453
C	6160	10,200	7925	11,550	5070	2680	8855	7635	5803	7431
D	28,500	4325	2600	24,250	4180	3325	26,375	4253	2963	11,197
E	3290	1000	940	2600	1160	1110	2945	1080	1025	1683
F	7230	1455	1385	8250	1495	870	7740	1475	1128	3448
G	4550	2080	2391	4520	2510	2985	4535	2295	2688	3173
Averages	7531	2989	2384	8080	2571	2084	7806	2781	2235	4274

Table II

Bacterial Counts: Control Series With Unmedicated Powdered Skin Cleanser

7 Subjects; 3 Supervised Washes Daily; 90 Seconds Each; Determinations Made on 4th and 5th Days, Basins #1, #4, #5. Counts to Be Multiplied by 1000.

	4th Day			5th Day			Averages			Average of 3
Subjects	Basin #1	Basin #4	Basin #5	Basin #1	Basin #4	Basin #5	#1	#4	#5	Basins
A	2740	1900	1669	651	262	101	1696	1081	885	1221
B	1504	1010	592	912	349	94	1208	680	343	744
C	6850	10,570	3620	6980	4000	3620	6915	7285	3620	5973
D	2950	830	933	2810	1076	588	2880	953	761	1531
E	957	932	990	654	729	248	860	831	619	752
F	535	221	95	837	86	130	686	154	113	318
G	1943	1620	820	2240	1480	670	2092	1550	745	1462
Averages	2497	2440	1246	2155	1140	779	2326	1791	1012	1710

Table III

Bacterial Counts: Series With 0.65% VL-1 Powdered Skin Cleanser

7 Subjects; 3 Supervised Washes Daily, 90 Seconds Each; Determinations Made on 4th, 5th, 9th and 10th Days, Basins #1, #4, #5. Counts to Be Multiplied by 1000.

	4th Day			5th Day		
Subjects	Basin #1	Basin #4	Basin #5	Basin #1	Basin #4	Basin #5
A	740	363	331	2000	1260	1108
B	466	518	413	870	598	477
C	1355	1140	646	2260	1520	891
D	1650	1355	1655	1872	213	310
E	58	22	13	216	152	89
F	584	362	180	174	100	70
G	248	67	63	50	23	18
Averages	729	547	472	1063	552	423

	9th Day			10th Day		
Subjects	Basin #1	Basin #4	Basin #5	Basin #1	Basin #4	Basin #5
A	300	124	76	360	96	146
B	96	98	32	1176	432	302
C	1184	1244	1058	1780	1840	1440
D	2800	1016	796	1188	280	310
E	668	208	140	288	104	66
F	428	236	190	172	126	66
G	420	344	132	1900	386	100
Averages	842	468	346	981	452	347

curves were plotted are tabulated in Tables 1, 2 and 3.

An examination of the curves plotted in Figure I shows that the *control* powdered skin cleanser (without germicide) is much superior to the control bar soap in the removal of bacteria; also, that the powdered *antiseptic* skin cleanser is much more effective than the *control* powdered skin cleanser and, more important, is equivalent in its degerming effect to the diluted standard liquid antiseptic soap.

The superior degerming effect of the control powdered skin cleanser as compared with bar soap is attributed to its superior detergent action and the efficient mechanical scouring action of its organic scrubber. Less efficient powdered skin cleansers might not be expected to exert as great a degerming effect.

Inasmuch as this is primarily an evaluation of a powdered *antiseptic* skin cleanser for industrial use, a comparison of it with the *control* powdered skin cleanser is most important from a degerming standpoint. Figure II expresses this comparison in terms of the per cent bacteria remaining on the hands. It will be noted that the powdered *antiseptic* skin cleanser is at least 60% more efficient than the control powdered skin cleanser in the removal of bacteria, thus producing and maintaining a much lower bacterial population on the hands. Figure IIa illustrates the bacterial reduction obtained with the powdered antiseptic skin cleanser as opposed to that for a control bar soap, Ivory.

A comparison between hexachlorophene and VL-1 in the same soap base was likewise indicated. This series was also conducted by means of the Cade method (2) on five subjects.

(*Turn to Page* 135)

Figure I. Control Soaps vs. Antiseptic Cleansers

7 Subjects, 3 Supervised Daily Washes, Determinations Made on 4th and 5th Days of Use
A—Control Bar Soap
B—Control Powdered Cleanser
C—0.65% VL-1 Antiseptic Cleanser (5th Day)
D—Septisol with Hexachlorophene 0.75%, Diluted 1:2 with Water
E—0.65% VL-1 Antiseptic Cleanser (4th Day)

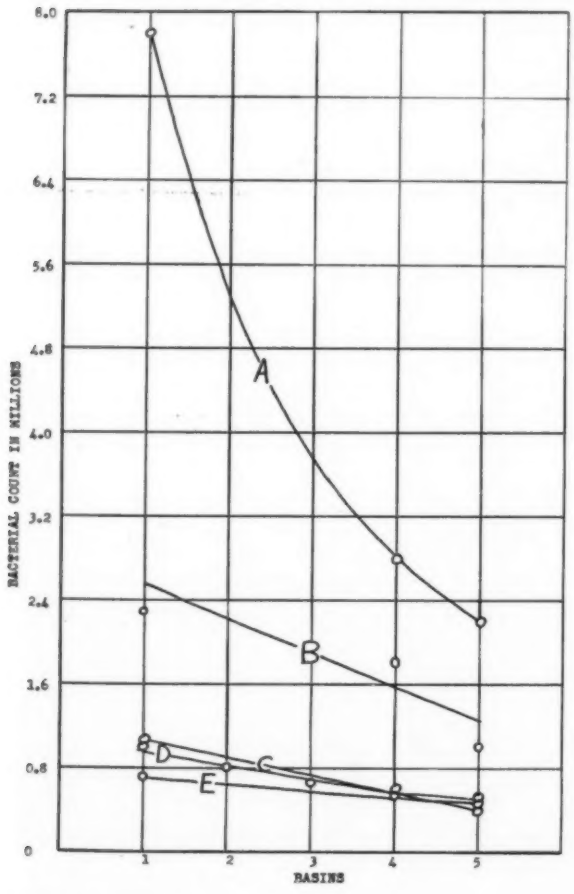


FIGURE II. Control Powdered Cleanser Vs. 0.65% VL-1 Powdered Antiseptic Cleanser

Comparison of Resident Bacterial Populations (Basins #4 and #5); 7 Subjects; 3 Supervised Washes Daily; 90 Seconds Each; Determinations Made on 4th and 5th Days for Control Soap and 4th, 5th, 9th and 10th Days for Antiseptic Cleanser

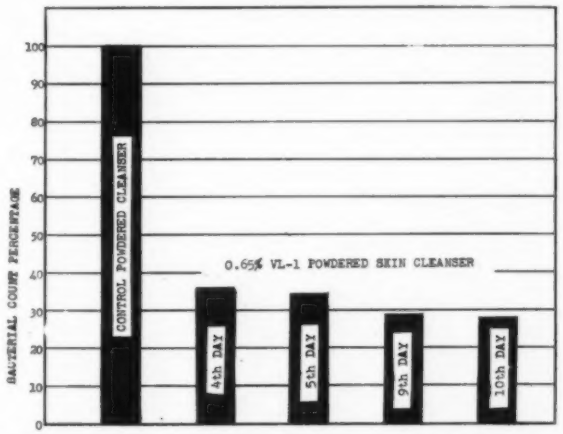
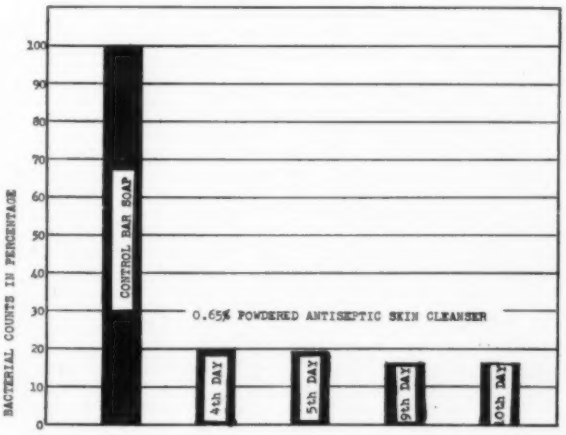


FIGURE IIa. Control Bar Soap Vs. Powdered Antiseptic Skin Cleanser

Comparison of Resident Bacterial Populations (Basins 4 and 5); 7 Subjects; 3 Supervised Washes Daily, 90 Seconds Each; Determinations Made on 4th and 5th Days for Control Soap and 4th, 5th, 9th and 10th Days for Powdered Antiseptic Skin Cleanser



New Phosphate for Soap

New glassy phosphate, having high sequestering power, unusual dispersing properties at pH 10 and above, with good wetting, improves soaps.

F. H. Mackenzie
American Dyewood Corp.

CAN soap win back the tonnage it has lost to synthetic organic detergents? The answer soap manufacturers want to hear, (yes), is not as remote a possibility as most of us have thought.

It should first be pointed out that it is beyond the scope of this article to give complete laboratory proof of every step of the analysis, but this can be done by the corollation of data available already in many laboratories throughout the country, plus the completion of some tests that are now going on with manufacturing techniques.

Synthetic detergents, that is the concentrates, are expensive, over $.20 per lb. They have exceptional wetting power, and, generally are not affected adversely by water hardness. However, their colloidal suspending and dispersing power is practically nil. Therefore, synthetic detergents by themselves, would have been practically no competition to soap. In fact, if we had not once been in the throes of a soap shortage when everything that would foam or wash dishes even without foam was eagerly gobbled up by the frantic housewives, it is doubtful that synthetic detergents would ever have been serious competition to soap in the household field. In fact, good synthetics were used for years by textile processing firms without once crashing the big household field.

With the development of stable sodium tripolyphosphate and CMC, synthetic detergents can now be compounded and spray dried into a product that has just about everything a soap powder should have, i. e., good wetting power, good colloidal suspending power and good dispersing properties. It is not precipitated into the cloth or on dishes by the hardness always present to some extent in household water.

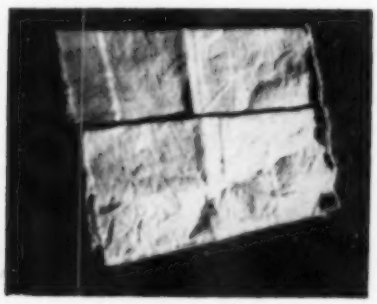
Now let us look at soap powder as competition. Granted the soap concentrate is cheap, and soda ash is cheap, and 7 to 10% tetrasodium pyrophosphate or tripoly is cheap and water of crystallization is cheap, what about the cleaning and rinsing properties? Their wetting power is fair, the colloidal suspending power is good, the dispersing power is good, but, and this is the big but, it just cannot be rinsed with hard water without precipitation of insoluble soaps into the fabrics or on the drinking glasses, dishes and silverware.

Soaps can be made more cheaply and better for washing than synthetic detergents, but when soap powders try to compete with synthetics for rinsing, there is just no comparison. If a well built synthetic were rated at 100% for rinsing, the present soap competition would probably rate under 10%, which means that the real disadvantage to the use of soap is poor rinsing in slightly hard water. The harder the water, the greater the handicap.

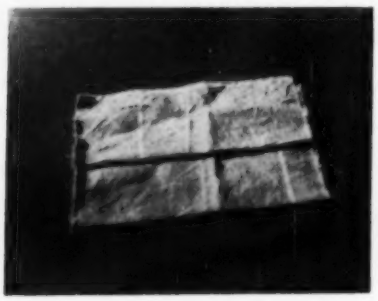
Coconut oil base will help. So will CMC. Tetrasodium pyrophosphate or tripolyphophate will help, but no amount of any or all of these materials will give rinsing without formation of insoluble soaps.

Fundamentally the sequestering and dispersing power of tetrasodium pyrophosphate and sodium tripolyphosphate can improve rinsability of soap. What is needed most to save face for soap in view of the terrific dilution of rinsing, is more sequestering and dispersing power per gram of phosphate and the use of a great deal more of this phosphate than has ever before been considered.

Some experience with a new glassy phosphate*, having very high sequestering power, unusual dispersing properties at a pH of 10 and above, together with the unusual wetting



"Hy-Phos" Soap



"Hy-Phos" Soap

"Hy-Phos" Soap

* "Hy-Phos" Trade Mark of American Dyewood Corp., Chester, Pa.

power it imparts to soaps, gives surprising results.

The accompanying unretouched photographs show a comparison of the soil removing ability of a soap mixture containing the new glassy phosphate, as against the best synthetic organic detergent having a high phosphate and CMC content. The synthetic organic detergent probably is the most popular household product on the market today.

On the edge of each photograph the soap sample is identified by the title on the border adjacent to the sample. It may also be identified by a white line on the left side when facing the fold of the cloth. The synthetic detergent has a white line on the right side when facing the fold of the cloth.

The mixture of the glassy phosphate and soap consisted of 30% glassy phosphate and 70% soap. The soap was composed of 85% tallow and 15% coconut oil. The washing and rinsing was done in water of 10 grains hardness. Similar results were obtained when 16 grains hardness water was used. There appeared to be no difference in the soil removal either with the synthetic detergent or the phosphate-soap mixture.

While the difference in intensity of whiteness of the standard soiled cloth samples is quite perceptible to the naked eye, we feel it is not quite so obvious on the unretouched photographs, but may be recognized. The photographs, made with light coming from different angles, were taken on a concrete pavement in morning sunlight with an inexpensive camera using Kodak "Super X" film.

Although the manufacturing techniques for such a soap have not been worked out, products of this nature have been spray dried and some work has also been done on flakes and bar soaps. The making of better washing and rinsing soap powders through the incorporation of a glassy phosphate and other additives is a distinct possibility and an interesting development that may reward those participating in the laboratory tests and in the establishment of manufacturing techniques.

New Shampoo Shown at Toiletries Show

A NEW concentrated shampoo for home use, to which "you just add water," and a new bubble bath tablet with chlorophyll attracted outstanding attention at the 10th annual Beauty and Fragrance Show, sponsored by the Chicago Associated Toiletries Salesmen at the Palmer House, Chicago, Sept. 14 to 19.

Nearly 100 exhibitors occupied all available space in the hotel's eighth floor display area and buying for the Christmas trade was reported brisk throughout the week. James H. Clock, Chicago representative of Nina Ricci Parfums, and president of the salesmen's association, commented that the rising national income, coupled with the fact that no shortages of essential materials exists, fully justify optimistic prospects for a booming business in the beauty trade field this coming winter.

Lightfoot Schultz Co., Hoboken, N. J., announced that their professional castile shampoo mix is now available for home use and brought beauty counter buyers in unusually large numbers to see the product which offers "60 shampoos for $1." Water content of the mix has been reduced to three percent, sales representatives explained. For use in the home the concentrated mixture is reconstituted by adding ordinary tap water. One teaspoonful in half a cup of warm water is sufficient for a thick lather shampoo twice over, it is claimed, while only six teaspoonsful are required to make a quart.

Another Lightfoot bargain, released only four days before the Chicago show opened, was a box of 18 cakes of toilet soap at a very low price. These are available in six fragrances with package designs appropriate for a Christmas gift. An extensive display was also made of the famous Lightfoot novelty sculptured soaps, to which a number of new designs have been added. In charge of the exhibit were E. Edward Shinkel and Verne H. Jernberg.

Trylon Products Corp., Chicago, introduced their new "Trylon" deodorant bubble bath tablet containing chlorophyll and processed lanolin for dry skins and also showed two other new products. One was a package of tiny Trylon Packettes, the other a cologne product in paste form packaged in a plastic container resembling a feminine purse compact. O. A. Barko, president and general manager, in charge.

Monogram Soap Co., Culver City, Calif., had several new products for the juvenile trade, including a "Mistress Mary" package for girls and its counterpart, a "Master Tom" box for boys. Each contained a cake of Monogram castile soap and a small tube of "Pepsodent" tooth paste with brush. For the girls there was in addition a bottle of toilet water, while the boys' box included a bottle of "hair trainer" and a comb. Monogram's "Walt Disney" line has been enlarged with two items, a bubble bath preparation and a character soap cake in a package designed to resemble a locomotive. Samuel Greenblatt, proprietor of the 30-year-old west coast company, presented a new line of private brand toilet soaps in four fragrances, packaged in a luxuriously designed box, available with embossed name of the customer, provided a reasonably large order is placed.

Allan B. Wrisley Co., Chicago, offered its "Bath Superbe" and "Toilet Superbe" in eight fragrances in a package newly designed as a "special" to mark the firm's 90th anniversary, which is being observed this year. Wrisley also had a new "Yacht Club" shower soap with cord packaged in a window box; a lotion and cologne combination in newly designed stand-up set; and two new novelty soaps, "Snow Man" and "Big Top," in new window boxes. To assist in retail store promotions the company arranged a suggested model group display of its complete line of bath essentials, including soaps, bath crystals, bath oil and a new after-bath "Freshner."

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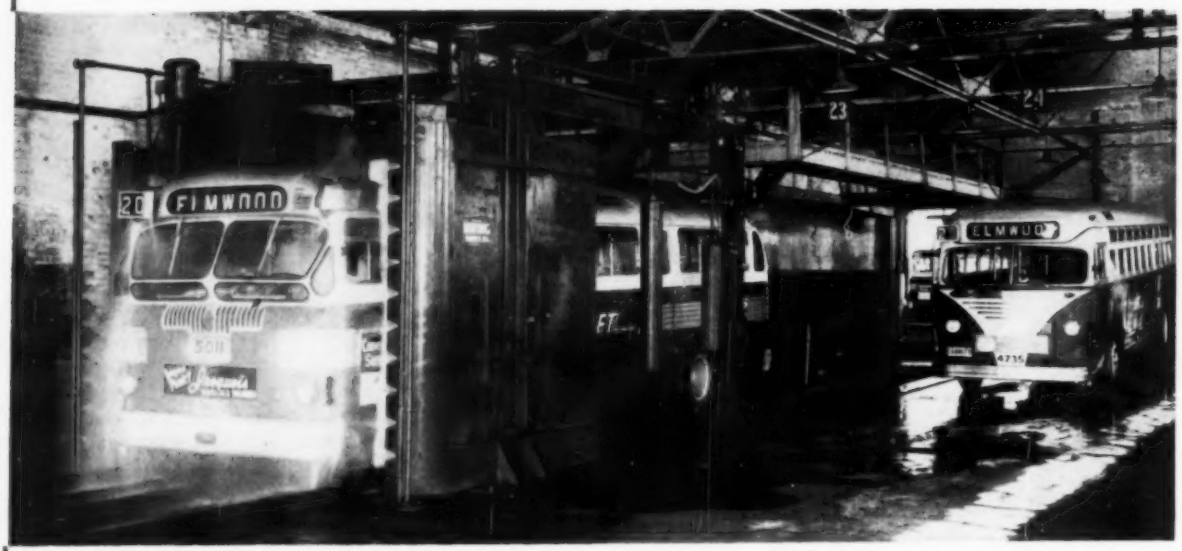


A Niagara Frontier Transit System bus passing through a Whiting washing device. Front and back of bus were cleaned by hand before bus entered machine. Front brushes clean, rear ones rinse, others clean eaves and roofs of buses in one operation.

Automotive Fleet Cleaning

BUSES, whether city, inter-urban or long distance, with their thousands of passengers from all walks of life, present a real problem in their cleaning processes. They must be clean, inside and out, and the welfare of the public must be considered from every possible angle. A bus company that has solved these problems very well is the Niagara Frontier Transit System, Inc., of Buffalo, N. Y.

This company owns and operates 820 buses which are used in the city of Buffalo and on inter-urban runs to Niagara Falls, N. Y., and intermediate points. Most of these buses are operated daily and a strict cleaning schedule is maintained for them.

The first operation of each cleaning program is the sweeping of a bus with a No. 12 horsehair push broom. Approximately 4100 buses are thus swept weekly. At this same time a disinfectant is sprayed on the floors. The disinfectant used for this purpose is a chloraline material, about two 55-gallon drums of which are required each year. This is a very necessary but more or less minor part of the cleaning process. Washing of the buses and other cleaning operations take up much time and labor. The NFT estimates that the time required for this work amounts to 121,000 man-hours annually.

The exteriors of approximately 1600 buses are washed each week, on a bi-weekly basis. This may be done in two ways—by manpower with fountain brushes, or at three locations where mechanically operated bus washing machines have been installed. One of these is a Ross, the other two are Whitings. These machines are equipped with electrically operated, vertically arranged revolving brushes, so designed and arranged that they clean the side body, outside of windows, eaves and roofs in one operation. There are eight sprays usually provided, two in front for washing, two in rear for rinsing, and four brush sprays. All spray pipes are equipped with special nozzles and an individual water valve. Water pressure during washing is maintained at about 40 pounds. The flat-spray nozzles wet the buses thoroughly and other jets of water flush away dirt from the brushes, thus making it possible to use clean brushes throughout the washing operation. A final rinse is given the bus to clear away all dirt.

Fronts and backs of buses must be washed by hand operated spray brushes before the bus enters the machine. When a cleaning product is also used in these operations Turco No. 2220 has been chosen by the company.

For a more complete cleaning job about 44 buses are washed each week, on a 10,000 mile basis, inside and out, by hand. Again Turco No. 2220 is used. For this work hand brushes equipped with fountain handles are used for the exterior of the buses and stiff bristle scrub brushes, sponges, whisk brooms, chamois and wiping cloths are employed on the interior. Every inch of a bus is thus washed.

As the seats are covered with leather, it is possible to wash them as well as walls, windows and floors of the buses. For this purpose seat cushions are removed and cleaned and the frames and backs of the seats scrubbed with a stiff brush and Turco cleaner before the cushions are replaced. At this time the floors are also flushed with a hose at ordinary city water pressure. About 2000 pounds of the Turco cleaner, purchased in 125

pound containers, are required annually for these washing operations.

For extra interior care the windows of approximately 400 buses are washed on the inside every week with a special window cleaner.

Also, after every 10,000 miles of travel, the engine of every bus is thoroughly cleaned. This is done with a high pressure steam Jenny cleaner which cleans the radiator and engine block in one operation. Oakite Cleaner No. 92 is used with this equipment and the combination of the cleaner, the steam and the pressure work miracles with all undesirable deposits.

Approximately 3,000 pounds of "Oakite No. 92," also furnished in 125 pound containers, are used annually for the cleaning of chassis and engines of all buses of the NFT. The

By Ethelyn Weller

total cost per year for the cleaning materials just mentioned amounts to approximately $1500. This is in addition to the wages paid for the 121,000 man-hours required for the work, which amounts to over $175,000.

There is another interesting item in regard to the operation of these buses. Recently the NFT purchased 300 new, diesel operated vehicles. These are so equipped that at all times while running fresh air from the outside is drawn into the bus and forced through ducts to outlets placed at headline level all along the length of the bus. This is thermostatically controlled so that ventilating fans may be shut off and heater motors turned on when the temperature warrants it. Thus there is always fresh air in a bus, kept at a temperature that makes for comfort of the passengers.

Another bus line that caters to many travellers in the Buffalo area is Blue Bus Lines. This is a small fleet of 22 reclining-seat, parlor coaches, with terminals in Buffalo, Batavia and Rochester. The company's headquarters and only garage are in Batavia. These buses are shining examples of well-kept property.

Unless chartered and so kept out for some special purpose, all Blue Buses are in the garage from one o'clock until 5:45 a.m. every night and all buses are washed during this time.

A crew of men works all night washing buses and doing other necessary work on them to assure clean, properly fit vehicles for the morning.

Buses are washed by brush by hand with Cudahy soap powder. Lack of space in the present garage has made it impossible to install a mechanically operated washing machine, but plans are now under way for the erection of a new and larger garage and in this a machine will be installed. It is realized that this would facilitate the washing process and save many hours of labor. As compared with the NFT, which washes a bus by machine in about five minutes, it requires a little more than one man-hour to hand wash a Blue Bus.

Interiors of all Blue Buses are cleaned nightly. This involves a slightly different procedure than for the NFT buses as Blue Buses have seats upholstered in mohair. Floors are mopped with a "Pine Odor Liquid Soap," and when odors develop Clorofen is sprayed under the seats. Seats are thoroughly brushed.

Every fifteen days the upholstery is vacuum cleaned and the sidewalls of the buses are washed with water and "Vel" synthetic detergent. About every two months, oftener if necessary, the upholstery is more thoroughly cleaned with "Fleet Upholstery Cleaner."

The outside of the windows is included in the nightly washing schedule, but interiors of windows are cleaned only about every ten days with "Trico Glass Cleaner."

Much of the same steam system as that used by NFT is employed by Blue Bus Lines for cleaning motors and under-carriage parts of buses.

Blue bus executives said that it was difficult to state figures on amounts of these materials used for cleaning of buses only, or on costs, as the company has purposely adopted materials which can be used throughout the Blue Bus system generally. Similarly with man-hours consumed in the work, men who wash buses do other work in the garage.

The system includes the three terminal waiting rooms with rest rooms and restaurants. The material used for cleaning bus windows, for instance, is used for all other windows. Other cleaning materials serve similar general purposes. This method has meant considerable savings for the company, however, as materials are purchased in bulk, with resultant savings, and divided among the three terminals.

Taxi Fleet Cleaning

A HIGHLY popular method of public transportation when the distances are short is by taxi. Here again, Buffalo has a company which operates a fleet of 140 exceptionally well cared for cabs. This is Van Dyke Taxi & Transfer Company.

The firm has operated taxis in Buffalo for many years and has maintained a reputation for its clean cabs. Its taxis today are radio operated, which means even more constant use of the vehicles than previously. Its huge garage resembles a small industrial plant.

As with the bus lines, cars are washed at night. A crew of six men do this work. As the cabs come into the garage between the hours of midnight and seven in the morning they are run on a wash rack and a thorough job of cleaning is done. This continues all night with production assembly line efficiency so that every car may be washed by seven o'clock.

The six men clean taxis, inside and out, in ten minutes. This includes washing the exterior of each car with a liquid soap solution, rinsing and drying. Cabs are upholstered in leather and floors are covered with rubber mats, so that the entire interiors may also be washed with a liquid soap solution. A perfumed powder is used to remove objectionable odors and cabs are sprayed with a liquid insecticide from time to time.

The liquid soap, which may vary in brands, is purchased in 50 gallon drums, one of which is used every two months. About a quart of the liquid insecticide is used weekly. The cost of these materials amounts to

(*Turn to Page 98*)

Photo courtesy Oakite Products, Inc.

Electrocleaning parts by tank method before electroplating.

METAL

CLEANERS for mechanical, spray type washers should produce little or no foam. Although some foaming of a cleaner may aid in removing contamination from the solution, excessive proportions of soap or wetting agent may cause an objectionable degree of foaming. (42) Although alkaline spray cleaners may contain small percentages of these agents, their use may perhaps be avoided through the employment of certain non-foaming nonionic detergents.

Products for spray cleaning need not be complex. Indeed, alkaline spray cleaning can be done satisfactorily and economically with single compounds such as sodium orthosilicate, sodium metasilicate, tetrsodium pyrophosphate or trisodium phosphate. (36) If, however, a more rounded action is desired, a mixture, (42) like the following may suffice:

	per cent
Soda ash	30
Trisodium phosphate	60
Caustic soda	10

Mabb (23) mentions that a mixture of equal parts of sodium metasilicate and soda ash, in a concentration of 1 or 2 ounces per gallon, may be used for the machine cleaning of magnesium and aluminum base alloys, as well as copper, brass and steel.

Considerably more complex, and containing a soap, is the following medium duty cleaner for use in power washers on stampings and finished parts made from aluminum, steel, cast iron, copper and brass:

	percent
Sodium metasilicate	50
Trisodium phosphate	35
Sodium hydroxide	8
Tetra sodium pyrophosphate	5
Soap (Nopco Soap C*)	2

(* Nopco Chemical Co., Harrison, N. J.)

In power washing, this is used in a ratio of 1/4 to 2 ounces per gallon of water. The cleaner may also be used in soak tanks at a rate of 2 to 8 ounces per gallon, but in this method it is recommended only for steel, copper and brass. It likewise serves as a good anodic electrolytic cleaner for steel; being used at the rate of 4 to 8 ounces per gallon of water.

Electrocleaners

ALTHOUGH, as indicated by the foregoing, some alkaline metal cleaners may be used interchangeably in the different procedures, some products are designed specifically for use in electrocleaners. According to Lux, (17) some of the basic requirements of a good electrocleaner are as follows: (a) high electrical conductivity, (b) wetting, penetrating, emulsifying and deflocculating action, (c) controlled tendency to form a foam blanket, (d) ability to remove smut and solid-particle soil, (e) water-softening ability, (f) inhibited to prevent attack and tarnish on non-ferrous metals, (g) proper buffering to maintain optimum pH range, and (h) relatively high tolerance to chromic acid contamination.

The formulation of alkaline electrocleaners has sometimes been compared with soak type cleaners. However, as noted by Sizelove, (29) there are two main differences between the two types of products. First, electrocleaners contain practically no organic emulsifiers or synthetic wetting agents. Second, the alkalinity balance is different so as to give the electrocleaner a much higher electrical conductivity than that obtained with soak cleaners.

Thus, a typical cathodic process cited by Mabb (23) makes use of a solution consisting of 4.5 ounces of trisodium phosphate and 1.5 ounces of metasilicate per gallon of water. A few years ago, Hazel and Stericker (43) reported that zinc or zinc casting alloys could be cleaned anodically in 3 per cent solutions of sodium metasilicate or sesquisilicate.

Many of the newer developments in electrocleaning are, of course, described in patent specifications. (44, 45) For example, Burkhardt (46) uses a bath containing sodium tetrapyrophosphate for anodically cleaning and polishing iron, steel, copper and copper alloys, nickel and aluminum. Webster, (47) however, uses a more complex composition, containing a caustic alkali, sodium chloride, sodium aluminate and an alkali cyanide, for electrolytically cleaning metal.

Providing one of the exceptions to the statement that synthetic wetting agents are not used, Orozco (48) includes small proportions of these substances in his compositions for the anodic degreasing of metals. However, studies (49) have shown that efficient electrolytic degreasing of steel can be achieved with a solution containing trisodium phosphate, sodium hydroxide and sodium silicate.

CLEANERS

By Milton A. Lesser

PART II

Of course, solvents are extensively used and serve efficiently to degrease metals. In the opinion of Halls, (50) solvent degreasing can be the cleanest, most rapid, efficient, and safest of cleaning operations. Applicable to both the ferrous and non-ferrous metals encountered in industry, the process is employed to remove oil, greases, waxes, fats and such lubricants and protective coatings that are used in rolling, machining, stamping and other forming and manufacturing operations. Solvent degreasing is also employed for removing coatings placed on the work to protect it from corrosion during storage. (51)

Solvent cleaners are used for cleaning steel parts in preparation for lacquering, painting, enameling, galvanizing, tinning, plating, bonderizing, heat-treating and pickling. They are also used for cleaning metal parts prior to inspection or assembly or in preparing them for subsequent processing or finishing operations such as rustproofing, painting, electroplating or the like. Eagle (52) advises the precleaning of non-ferrous metals with solvent degreasers to reduce the time of contact with final alkaline solutions. Conversely, it is advised that degreasing be followed by some other method of cleaning, usually alkaline cleaning, before electroplating and similar operations. This is necessary because solvent degreasing does not usually provide a chemically clean surface. (4, 27)

In earlier procedures, degreasing was done by hand, tank dipping, or spraying with such solvents as kerosene, gasoline, naphthas, Stoddard solvent, and aromatic solvents. About 1928, with the introduction of vapor degreasing methods, the chlorinated hydrocarbon solvents came into prominence. (4) As noted by Walter, (51) the chlorinated hydrocarbon solvents now in general use have the highest affinity for oils and greases; removing them rapidly, easily and completely. They are noninflammable and are safe to use in properly designed and correctly operated equipment.

Trichlorethylene, the most important of the chlorinated hydrocarbons, is the most widely used vapor degreasing solvent because of its low specific heat, comparatively high vapor weight, and the ease with which it lends itself to stabilization with organic bases. Perchlorethylene finds less extensive use, says Walter, but it is particularly valuable, if there is a large amount of moisture on the work.

Chlorination Hydrocarbons

ALTHOUGH other types of solvents have been introduced, (53) these chlorinated hydrocarbons dominate the field of metal degreasing. Methods have been devised to improve their stability (54, 55) and cleaning power. (56) Small proportions of certain surface active agents are useful for promoting better cleaning action of these organic liquids. (57, 58)

Degreasing solvents may be applied as dips, sprays or in the form of vapors, or as a combination of these methods. Dipping into or spraying with solvents serves to remove light cutting compounds, slushing oil, and grease. However, the immersion of parts in a dip tank has the marked disadvantage that the film of oil or grease floating on the solvent has a tendency to adhere to the work as it is removed from the tank. (2) These disadvantages are avoided when the spray method is used. Spraying is also applicable to larger surfaces.

However, many metal finishers are taking advantage of the advances made by the introduction of solvent vapor degreasing. In this method the parts to be cleaned are passed through a vapor of heated chlorinated solvent, such as tetrachloroethyelne or perchlorethylene. The work is held in this vapor for a short time, during which the vapor condenses on the part and the liquid streams off; taking the grease, oil and dirt with it. The work emerges clean, warm and dry.

Nonetheless, the vapor degreasing method has its limitations. It does not work too well with intricately shaped parts and it provides no mechanical action to remove heavier contaminations. Under such circumstances it may be advisable to combine vapor degreasing with other solvent cleaning methods. These include immersion-vapor, spray vapor or vapor-slush degreasing, and vapor-spray-vapor degreasing. (14, 18, 51, 59) This last method is said to be the most positive procedure for removing caked-on dirt or insoluble material. In this process, the work is first wet with solvent vapors and then pressure-sprayed to remove solid particles and clean depressions and open cavities. The final phase of the cycle is vapor cleaning. (60)

The equipment required in these operations is specialized, compact and efficient. Hence workers must be well versed in both operational and maintenance procedures if good, economical results are to be obtained. To this end, detailed instructions are provided both by the producers (61) of the solvents and the manufacturers (62) of the machinery.

Degreasing of metal surfaces can also be achieved with the more complex solvent emulsions. Gray (63) recalls that solvent emulsion cleaners were developed to elimi-

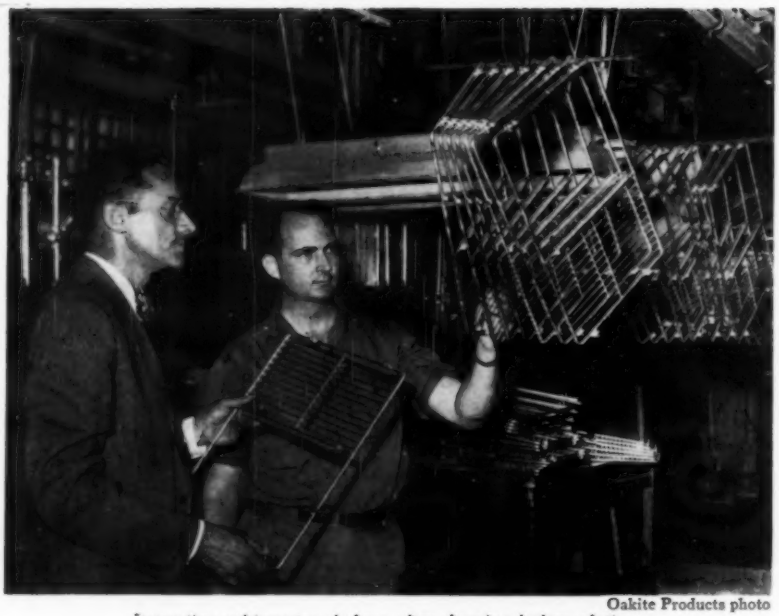
nate hard scrubbing prior to electroplating. Hence, they are not to be considered as substitutes for alkaline metal cleaners or vapor degreasing, but rather as supplements to them to help do a cleaning job better, faster and cheaper. Since they have no action on active metals like zinc, aluminum, lead, tin, copper, and brass, the use of solvent emulsions as precleaners permits a very short immersion in an alkaline cleaner with almost no attack on the alkali-sensitive metals.

According to Meyer, (64) cleaning with emulsifiable solvent cleaners is done in two ways. In one method, the article is immersed in the cleaner so that the solvent penetrates and loosens the oil film. The oil plus the solid dirt is then flushed or rinsed off the surface with water. This method is excellent for preparing metals for phosphate treatment. It is also useful as a precleaning operation prior to the employment of alkaline cleaners.

In the second method, the emulsifiable solvent cleaner is diluted with water. Employed in cleaner concentrations of 1 to 15 per cent by volume and at temperatures ranging from 70 to 210°F., they are used in spray washers or in agitated tanks. Such preparations effectively remove oils, buffing compounds and much inorganic dirt. Sometimes, says Meyer, alkalies are added to emulsion spray cleaners.

Generally sold as concentrates that may be used straight, but usually diluted with a suitable solvent or water, these cleaners consist basically of solvents and emulsifiers. Kerosene and naphtha are the degreasing solvents commonly used, but others may be employed. Various anionic and nonionic surfactants make suitable emulsifiers for formulating these cleaners. (33) In addition to these basic ingredients, the preparations may contain couplers, detergents and wetting agents. Sometimes rust-inhibitors are present.

Several such solvent emulsion cleaners are described in patent specifications, (65-70) but useful formulas are also given in the technical literature. For example, Schmerling (71) describes the developments of an emulsion cleaner consisting of:



Oakite Products photo

Inspecting refrigerator shelves after cleaning before plating.

	per cent
Pine oil	62.0
Oleic acid	10.8
Triethanolamine	7.2
Ethylene glycol monobutyl ether	20.0

This is diluted before use with an equal volume of a mixture of equal parts of naphtha and white spirit.

The commercial literature provides the following formula for a self-emulsifying metal degreasing compound:

	per cent
Kerosene	92
Polyoxyethylene sorbitan trioleate (Tween 85*)	2
Polyoxyethylene sorbitol pentalaurate (Atlas G-1061*)	5
Sorbitan monooleate (Span 80*)	1

(* Atlas Powder Co., Wilmington, Del.)

The ingredients are mixed at room temperature to yield a clear solution. The formula can then be further diluted by adding a mixture of 9 parts of kerosene to one part of the formula for application. It may also be diluted with 9 parts of trichlorethylene or carbon tetrachloride to one part of the formula to give clear solutions for actual degreasing of metals.

A similar source (72) provides the two following formulas for solvent emulsion cleaners:

	I	II
Kerosene	89.0	—
Naphtha	—	82.0
Triethanolamine	3.2	4.3
Oleic acid	10.0	14.0
Water	100.0	100.0

Mix the solvents with the oleic acid. The water and the amine are similarly mixed separately at ordinary temperatures. Add the solvent solution to the water solution with vigorous agitation. Stirring should be as rapid as possible at the start and continued for a short time after the white emulsion is formed. A mechanical mixer or homogenizer is essential to produce an emulsion of good stability.

Davidsohn (33) reports that emulsion cleaners based on petroleum sulfonates are prepared by stirring warm water into a mixture of kerosene and sulfonate over a period of 15 minutes. In the following examples, formula I can be diluted to any concentration with warm (50°C.) water, while formula II may be diluted similarly with cold water:

	I	II
Kerosene	45	19
Petroleum sulfonates	10	4
Water (50°C)	45	77

Diphase Cleaners

THERE is a good deal of interest in the so-called "diphase" metal cleaners. Used with either dip or spray techniques, preferably the latter, these products are formulated to give unstable or two-phase emulsions when diluted with several times their volume of water. On the basis of their experience with these products, Reich and Snell (73, 74) point out that a

diphase cleaner has a number of advantages and is notable for the following characteristics: (a) the metal is simultaneously subjected to the action of an aqueous and a solvent phase, (b) the solvent phase is capable of dissolving oils and greases and preferentially wetting metal surfaces, (c) the aqueous phase dissolves water-soluble soils and preferentially wets various mineral soils, (d) the solvent phase is of low viscosity, and (e) the solvent phase shows some tendency to emulsify either in water or in a suitable aqueous solution which may be used for rinsing.

In general, say these workers, experimental work has shown that diphase cleaners are more effective than stable emulsion cleaners in removing grease and soil from metal surfaces. A typical formulation for a diphase cleaner is given as consisting of:

	parts
Mineral spirits	89.0
Oleic acid	7.2
Triethanolamine	3.8

In contrast to the usual procedure for making stable emulsions, the ingredients in this formulation are mixed together and the resulting solution stirred with water so that very little emulsification occurs. The water becomes slightly cloudy, but most of the solvent remains floating as a free layer.

Reich and Snell cite the following as an example of a diphase metal cleaner that has been used extensively in industrial metal cleaning:

	parts
Mineral spirits	67.0
Pine oil	22.5
Oleic acid	5.4
Triethanolamine	3.6
Ethylene glycol monobutyl ether	1.5

A number of unstable emulsion cleaners of this type have been patented. (75, 76, 77) Occasionally the formulation of such a product is given in the commercial literature. Thus, an unstable type of emulsion or diphase cleaner, that gives preferential wetting and is very effective for degreasing metals, may be prepared with a nonionic surfactant, as follows:

	per cent
Kerosene	65
Nonionic emulsifier (Sterox CD*)	25
Water	10

(* Monsanto Chemical Co., St. Louis, Mo.)

Five parts of this preparation are used with 95 parts of water to give a dispersion which, if kept in motion, remains dispersed.

Acids as Metal Cleaners

SCALE and other metallic oxides, as well as traces of alkaline residues are removed from metals through the use of acids. Hydrochloric acid or sulfuric acid are commonly used for ferrous metals. Combinations of sulfuric, nitric, hydrochloric, hydrofluoric, and chrome acid, and certain inorganic salts are used on non-ferrous metals to remove corrosion products and to obtain cleaning and brightening effects. (4) In the case of magnesium, for example, hydrofluoric and chromic acids, alone or in combination, are found in most of the pickles and chemical treatments used on this metal. (78)

In the removal of scale and rust from iron and steel with sulfuric and hydrochloric acids, pickling "inhibitors" are used with these acids to minimize attack on the metal. Quite a number of such agents are available to help save acid, conserve metal and reduce pitting. (79-82) A better penetration and more uniform action on the metal, as well as less pitting, are obtained when surface active agents are included with inhibitors in the acid cleaning and packing baths. (33) Both anionic and nonionic surfactants may be used in these acid solutions.

A number of variations in the preparation of acid cleaners are, of course, provided in the patent literature. (83) In one case, (84) sodium bisulfate, which hydrolyzes in solution to yield free acid, is combined with a synthetic detergent to form a stable solid product. When added to water, it forms an acid solution that is capable of removing scale, oxides, greases and oils from ferrous and non-ferrous surfaces. A somewhat similar product, patented (85) abroad, makes use of sodium bisulfate, sodium sulfate and sulfonated anthracene oil. Also interesting, are the oil-in-acid type of emulsion cleaners for removing rust, scale and oily deposits from metals. To make these cleaners, solvents like kerosene and *ortho*-di-chlorobenzene are emulsified with solutions of hydrochloric acid. (86)

Phosphoric acid also has an important place in compositions for cleaning metals. This type of cleaner, says Bardini (14) is especially useful in the removal of rust due to exposure between fabrication and finishing. These mild phosphoric acid cleaners will etch the metal surface, thus producing an improved base for paint finishes.

As with the other types of acid cleaners, those based on phosphoric acid may be modified in various ways to give better results. To this end, the composition may contain wetting agents, (87) emulsifiers, (88) or organic acids. (89) In one procedure, (90) a solution of phosphoric acid is coupled with an aromatic petroleum solvent. The resulting composition not only removes oil, grease, metal oxide and the like from the metal surface, but also deposits a metallic phosphate coating on it.

Obviously, the benefits of cleaners containing phosphoric acid are not limited to ferrous surfaces. (91) Aluminum, for example, can benefit from the use of cleaners made with this agent. (92) According to a manual (2) on the finishing of aluminum, one recommended formula consists of about 10 per cent of phosphoric acid, 40 per cent of butyl alcohol, 30 per cent of isopropyl alcohol, a small proportion of a wetting agent, and water. In addition to its ability to remove light oxide films, this type of cleaner also forms a thin, inert aluminum phosphate film on the surface which tends to resist moisture penetration and promote paint adhesion.

Further utility of phosphoric acid is illustrated in the formula given in Military Specification MIL-C-5410A. Providing standards for a cleaning and brightening compound for use on aluminum surfaces, this specification contains the following control formula as a basis for comparing the performance of manufacturers' products:

	per cent
Orthophosphoric acid (85%)	3
Citric acid	4
Synthetic soaps	2
Methyl ethyl ketone	3
Water, distilled	88

(*Turn to Page* 98)

What's New?

Newest addition to the line of shaving products of Colgate-Palmolive-Peet Co., Jersey City, N. J., is "Palmolive Rapid Shave." Dispensing lather in aerosol form, "Rapid Shave" retails for 79 cents.

* * *

New vacuum cleaner (top, right) for wet and dry work is made by Kent Co., Rome, N. Y. It utilizes a by-pass motor, and is designed for quiet operation. The motor unit depends on a separate stream of air for cooling. The unit is mounted on two 12 inch rubber tired wheels with a caster in front for maneuverability.

* * *

Robert Gair Co., New York, has designed a "Plastafol" Christmas sleeve for cosmetic items designed and made for Bonne Bell, Inc., Cleveland, shown in bottom left. The sleeve transforms regular packing into holiday gift items. Sleeve is printed in pink and gold in wreath and ribbon design on Gair's own opaque white "Plastafol."

* * *

Soap on a rope, lower right, newest addition to the line of Allen B. Wrisley Co., Chicago, is designed for use in showers. New Wrisley "Yacht Club" soap features a cake of shower soap shaped like a life preserver. Item retails for one dollar.

The introduction of a new all-purpose cleaner, "Franklin's Liquid Detergent," has just been announced by Franklin Research Co., Philadelphia, manufacturers of floor maintenance materials. The newest Franklin product, shown in upper left, is a concentrated neutral cleaner which is said to clean equally well when diluted with hot, cold, hard or soft water. It cleans and deodorizes in one operation, without requiring scrubbing, the maker says.

• • •

New weed killer, upper right, "Emlen 2, 4-D," is made by Crawford Industries, Inc., Oil City, Pa. Comes in eight ounce, pint and quart "Duraglas" bottles of emerald green made by Owens-Illinois Glass Co., Toledo. Product is being distributed nationally through syndicate, hardware chain stores and service chains, as well as through feed mill co-ops.

"Bounce," lower left, is now being marketed by Bounce, Inc., Dayton, O., in pocket or handbag, two-ounce plastic bottles supplied by Elmer E. Mills Corp., Chicago. Containing hexachlorophene, menthol and witch hazel. "Bounce" can be sprayed through nylon stockings to freshen tired feet.

• • •

Another new addition to the line of Allen B. Wrisley Co., Chicago, is "Old Fashioned Lavender" soap (lower right). Three die cut toilet soap cakes with name imprinted come packed in an attractive gift box to retail for one dollar.

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News

Clossey in Cowles Post

William M. Clossey has recently been elected secretary and treasurer by the board of directors of Cowles

WILLIAM M. CLOSSEY

Chemical Co., Cleveland. He succeeds the late Chester H. Fisher. Mr. Clossey was secretary and treasurer of Broadhead Garrett Co., Cleveland, prior to joining Cowles, and before that he was associated with Ernst & Ernst. He is a member of the Ohio Society of Certified Public Accountants.

Purex F.T.C. Hearing

A hearing was scheduled to be held by Federal Trade Commission in Los Angeles, October 15, concerning charges against Purex Corp., Ltd., South Gate, Calif., on price discrimination in the sale of household cleansers and disinfectants, in violation of section 2(a) of the Clayton act as amended by the Robinson-Patman act.

AASGP Meeting Plans

A review of the changes in personnel and policies in Washington, D. C., as an outcome of the national elections will be among the high spots of the 26th annual convention of the Association of American Soap & Glycerine Producers, to be held Tuesday, Wednesday and Thursday, Jan. 26-28, at the Hotel Waldorf-Astoria, New York. The 1953 meeting, which follows closely the pattern of the 1952 convention, opens with an all-day session of the Fatty Acid Division. The division meets all day Tuesday, with time out for a group luncheon. There will be a luncheon speaker on that day, which concludes with a cocktail party and reception in the evening.

The first general session gets under way Wednesday morning, Jan. 27, when A.A.S.G.P. president, George A. Wrisley, of Allen B. Wrisley Co., Chicago, gives his address of welcome and review of the year's activities. Other speakers will discuss the economic outlook for the new year, as well as reviewing 1952 sales of soaps and detergents. Highlighting Wednesday afternoon are meetings of the Specialty Soap and Glycerine divisions and the Maid of Cotton fashion show, followed by a cocktail party. The final day of the meeting, which opens with the convention breakfast, includes a general session in the morning, at which time the raw material outlook is to be covered; meetings of the board of directors of the association and the industrial soap division will be held Thursday afternoon. The day's events will be climaxed by the reception and annual banquet on Thursday evening.

Stoeckle in New Post

Cliff S. Stoeckle has recently been appointed national product manager for "Aero Shave" by Boyle-Midway, Inc., New York. Mr. Stoeckle has been with the company for the past 23 years, and has served as regional manager for Boyle-Midway's northern sales region since 1948. The new appointment brings Mr. Stoeckle from Cleveland to New York.

LoDash Incorporates

LoDash, Inc., soaps, cosmetics, etc., has recently been granted charter of incorporation, listing capital stock of 200 shares no par value. Directors are Harriet Drucker, Brooklyn, N. Y.; John R. Sanders, New York City; and Claire Silver, Merrick, L. I., N. Y.

A. F. Thal Dies

A. F. Thal, general superintendent of Allen B. Wrisley Co., Chicago, died recently of cancer. He had

A. F. THAL

been with Wrisley since 1922, having previously been with Palmolive Co., Milwaukee. He was advanced from the post of superintendent to general superintendent and eventually became a director and assistant treasurer of the Wrisley Co. Mr. Thal was graduated from the University of Illinois in 1919 with a B.S. degree in chemical engineering. He received an M.S. from Illinois in 1920. He is survived by his wife and a married son, who lives in Santa Cruz, Calif.

Fatty Acid Classifications

Fatty acid users are currently being queried by U. S. Bureau of the Census concerning certain classification changes in the monthly Fats and Oils Report (M-17A and B). If accepted the changes will be incorporated in the report beginning January 1, 1953. The Fatty Acid Division of the Association of American Soap & Glycerine Producers requested the Bureau of the Census some time ago to adopt these changes, which would permit more clear-cut differentiation between the different types of commercial fatty acids and assist in indicating trends in their use. Fatty acid producers believe that all who must re-

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port will eventually find it to their advantage to have the proposed classification adopted.

The list of proposed classifications follows:

Stearic acid (40-50% stearic content) types commercially designated as single, double, triple pressed.

High palmitic acids; hydrogenated animal and vegetable fatty acids, and other stearic acids not reportable under stearic acid (40-50% stearic content).

Hydrogenated fish and marine mammal fatty acids.

Unhydrogenated Fish Fatty Acids.

Coconut and babassu fatty acids and other mixed or fractionated saturated fatty acids, lauric, caprylic, capric, and myristic.

Oleic acid (red oil)—undistilled and distilled.

Unsaturated animal fatty acids, other than oleic.

Unsaturated vegetable, fish or marine mammal fatty acids.

Atlantic Shifts Milask

Appointment of Alfred H. Milask as eastern sales manager of chemical products sales has been announced recently by Atlantic Refining Co., Philadelphia. Mr. Milask has been transferred to the company's headquarters in Philadelphia. Since 1948 he had been serving as sales representative for the southern territory, working out of the regional office in Charlotte, N. C. He has been succeeded in Charlotte by Willard E. Smith, who joined Atlantic after nine years' experience in chemical research and sales engineering in the southern textile industry.

Filtrol Appoints Ewing

Dr. F. J. Ewing was recently appointed director of the research department of Filtrol Corp., Los Angeles. Dr. Ewing replaces Robert B. Secor who has been advanced to administrative assistant to Gustave E. Kidde, manager of manufacturing and technical departments.

Gair Advances Tooker

Appointment of George J. Tooker as manager of the Natick (Mass.) Boxboards Division of Robert Gair Co., New York, was announced recently. Mr. Tooker served previously as technical advisor to the boxboard division. He joined Gair's industrial engineering department in 1941.

Michigan Sales Managers

Michigan Alkali Division, Wyandotte Chemicals Corp., Wyandotte, Mich., recently announced appointment of P. G. Fuger as manager of glass industry sales and of L. C. Reid as manager of the Western district, with headquarters in Chicago. These men will assume their new positions after the first of the year.

P & G Tops Ad Budgets

Procter & Gamble Co., Cincinnati, led all food and grocery firms in newspaper advertising during 1951 with an expenditure of $14,179,190. This represents an increase of 44.7 percent of the 1950 figure of $9,800,-614. Only General Motors does more newspaper advertising than P & G, according to figures recently published by the bureau of advertising, American Newspapers Publishers Association, New York. The entire laundry soaps and cleansers category scored the largest increase of any grocery classification, climbing 26.8 per cent over 1950 to $33,935,000. This increase is due partly to the large P. & G. budget.

Rheem in New Plant

Rheem Manufacturing Co., New York, recently announced that its new plant for production of "Rheemcote" multi-colored lithographed drums is in full operation in Linden, N. J. Rheem's Bayonne plant has been closed and all employees and equipment have been transferred to the Linden plant, which currently has a manufacturing space of over 185,000 square feet.

SAACI Nominators

The Salesmen's Association of the American Chemical Industry has elected Russell Boland, *Drug Trade News*, New York, as chairman of its nominating committee, it was announced at the society's 31st annual meeting, held at the Hotel Roosevelt, New York, October 21. Members selected by mail ballot six others to serve on the committee: George Poland, E. M. Sergeant Pulp and Chemical Co.; James McInnes, Jr., Commercial Solvents Corp.; Charles V. Douglas, Arvey Corp.; Jerome F. McGinty, Millmaster Chemical Corp.; George Smith and Gerald S. Furman, Gane & Ingram. The committee selects officers for the new year.

Logcher Visits S. A.

Dr. Henri F. Logcher, export manager for Magnus, Mabee and Reynard, Inc., New York, recently embarked on a two-month business trip and survey of Central and South America. Dr. Logcher will study essential oil markets, needs and conditions in Mexico, Central America, Colombia, Ecuador and Peru.

Buys Land in Oregon

Owens-Illinois Glass Co., Toledo, O., recently acquired approximately 70 acres of land in the Parkrode area of Portland, Ore., as a possible site for a new glass container plant.

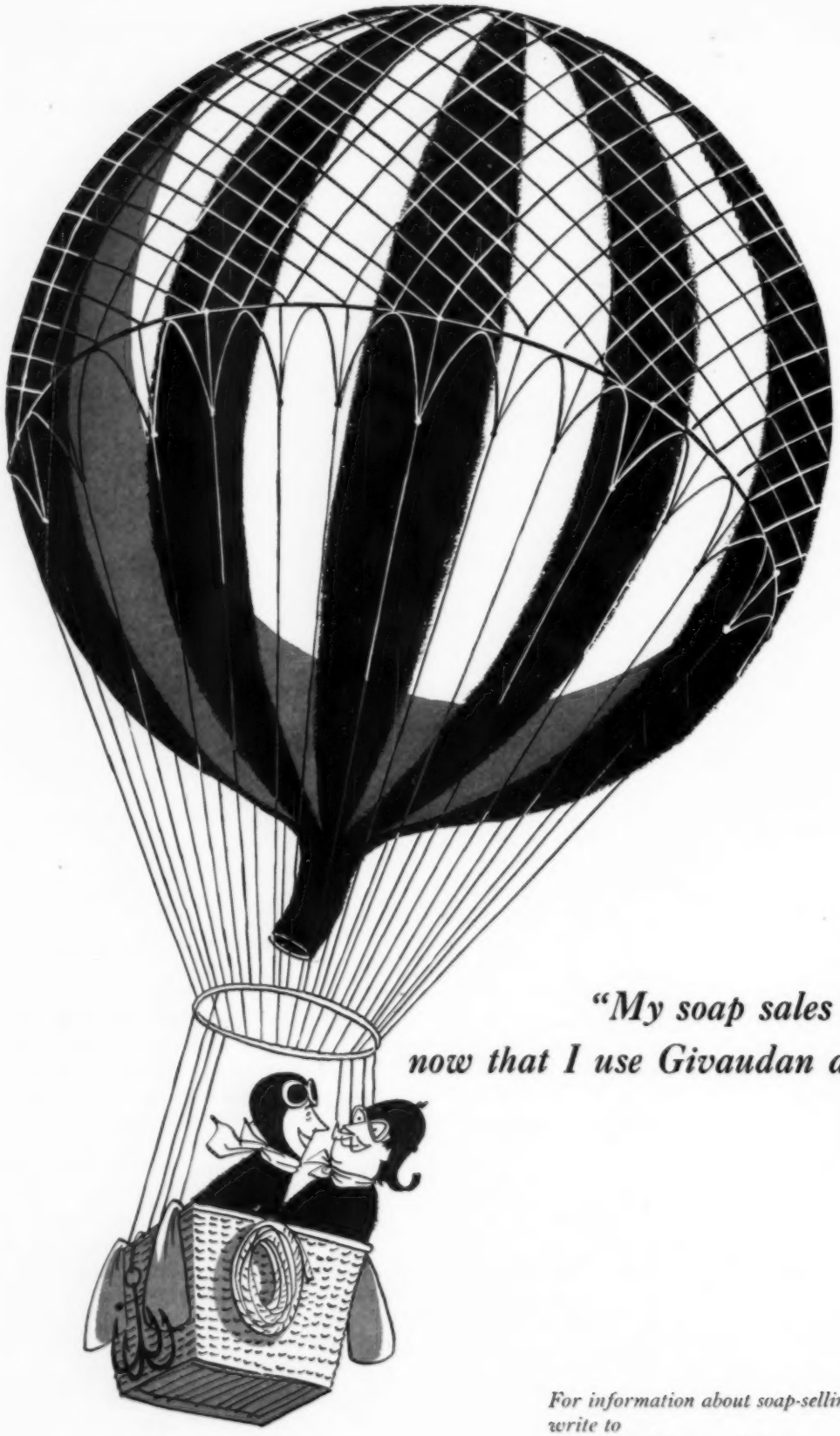
Joins Hayden Twiss

Consuelo Houseworth Kuhn recently joined the staff of The House of J. Hayden Twiss, New York advertising agency, as a chemical advertising copy writer. She will also be available to the firm's clients for product and market research and development work. Miss Kuhn was previously with Merck & Co., Rahway, N. J., as an analytical chemist.

Whittaker Michigan Agent

Whittaker, Clark & Daniels, Inc., New York, recently announced appointment of D. R. Leiser, vice-president of Harry Holland & Son, Chicago, as Whittaker representative in Michigan. He succeeds R. G. Smith, who has been made an executive salesman in New York, to assist W. W. Roff, vice-president of Whittaker. Mr. Leiser resides in Detroit.

At the same time it was announced that Whittaker, Clark & Daniels, has been appointed distributor of fibrous talc mined in northwestern New York State by W. H. Loomis Talc Corp., Gouverneur, N. Y. Whittaker will distribute the talc to all industries except the ceramic industry in Massachusetts, Rhode Island, Connecticut, New Jersey, and southeastern New York State.



"My soap sales keep rising now that I use Givaudan aromatics!"

For information about soap-selling fragrances, write to

Givaudan-Delawanna, Inc.

330 West 42nd Street, New York 36, N. Y.

Cos. Chems. Meet Dec. 11

The semi-annual meeting of the Society of Cosmetic Chemists will be held at the Hotel Biltmore, New York, December 11, it was announced recently. James H. Baker, program chairman, announced presentation of the following papers:

"Some Properties of Zirconium Compounds Significant to the Cosmetic Technologist" by W. B. Blumenthal, Titanium Alloys Mfg. Division of National Lead Co., New York; "Infra-red Spectrophotometry of Essential Oils" by A. Presnell, Andrew Jergens Co., Cincinnati; "Procedures for Testing the Efficiency of Deodorants" by Edward Sagarin, New York; "Evaluation of Some Organic Sulphur Compounds in Cold Waves" by Prof. H. G. DeKay, Purdue University; "The Value of Chlorophyll Derivatives as Local Deodorants" by Louis C. Barail, New York; "Further Studies on the Swelling of Hair" by Dr. H. Powers and G. Barnett, Warner-Hudnut, Inc., New York; "A Practical Evaluation of Chlorophyll in Controlling Breath Odors" by Jos. W. E. Harrison, K. S. Konigsbacher, G. J. Cox, J. W. Hein, Wm. H. Danker, S. Wah Leung, and R. Heggie; "The Incidence and Nature of Allergic Skin Reaction to Lanolin" by Thelma Warshaw, Marion Sulzberger, Franz Herrmann, N. Y. U. Hospital.

At the dinner the society will present its medal award for 1952 to Dr. Everett G. McDonough, vice-president and general manager of Evans Research and Development Corp., New York. Dr. McDonough's most recent contribution to the art and science of cosmetics consists in the development of "cold waving."

Lever Names Neubert

Appointment of H. Norman Neubert as brand advertising manager for "Surf" and "Swan" was announced recently by Lever Division of Lever Brothers Co., New York. Mr. Neubert's previous associations include National Broadcasting Co., where he had been merchandising manager of the owned and operated station division, and R. H. Macy Co., New York.

Honorary C-P-P Chmn.

C. S. Pearce, from 1928 until 1933 president of Colgate-Palmolive-Peet Co., Jersey City, N. J., was elected honorary chairman of the board of directors, it was announced Oct. 20, by E. H. Little, president. Besides being president, Mr. Pearce was chairman of the board of the company and at the time of his election as honorary chairman, was a

C. S. PEARCE

member of the board's executive committee.

He began his career in the soap industry with B. H. Johnson Soap Co. of Milwaukee, which in 1917 changed its name to Palmolive Co. Mr. Pearce was elected president of Palmolive Co. in 1924, and was instrumental in effecting its merger with Peet Brothers Co. in 1926. The new company, Palmolive-Peet Co., under the leadership of Mr. Pearce, merged with the Colgate Company in 1928 to form the present firm of Colgate-Palmolive-Peet Co.

Stein Equipment Moves

Stein Equipment Co., recently announced removal of its office from New York to 107-115 Eighth Street, Brooklyn 15. The company's shops and warehouses are located at the Brooklyn address.

History of German Industry

"Germany's Chemical Industry, a Balance Sheet covering 75 Years," is the theme of an anniversary issue of *Chemische Industrie*, which appeared in October. It contains economic and technical and technical surveys of every branch of the industry, stressing the interplay of chemical and other branches of economic life. There is a comprehensive history of the I. G. organization. Short outlines of the development of 210 chemical firms are included. Statistical material and a chronological table are appended.

MCA to Meet in N. Y.

The Manufacturing Chemists' Association recently anounced that it will hold its 1952 semi-annual meeting at the Hotel Statler, New York, Tuesday, November 25. Program and arrangements are under the direction of John E. McKeen, president, Chas. Pfizer & Co.; Harold W. Fisher, Esso Standard Oil Co.; D. S. Frederick, vice president, Rohm & Haas Co.; and J. Oostermeyer, president, Shell Chemical Corp.

New Fritzsche Price List

Fritzsche Brothers, Inc., New York, recently issued its October, 1952 revision of its price list of essential oils, aromatics, and allied products.

P & G Annual Meeting

At the recent annual meeting of Procter & Gamble Co., Cincinnati, R. R. Deupree, chairman of the board, told shareholders that the company's growth in the last 25 years had been financed entirely by its earnings with the exception of the recent $30,000,000 borrowing for a chemical pulp plant. Certain soap products have been replaced by synthetic detergents, he said. This had made a great deal of soapmaking equipment obsolete. Plant investment to meet the situation has been greater than normal. New and stronger competition in the cleansing field made continuance of a vigorous research policy even more necessary, Mr. Deupree pointed out.

Fibre Drum Makers Meet

The Fibre Drum Manufacturers Association held its midyear meeting at the Jung Hotel, New Orleans, October 15, 16, and 17. All officers were reelected. C. E. Eggerss, vice-president, Continental Can Co., Van Wert, O., and president of the association, presided over the business sessions which included reports by officers and five committee chairmen.

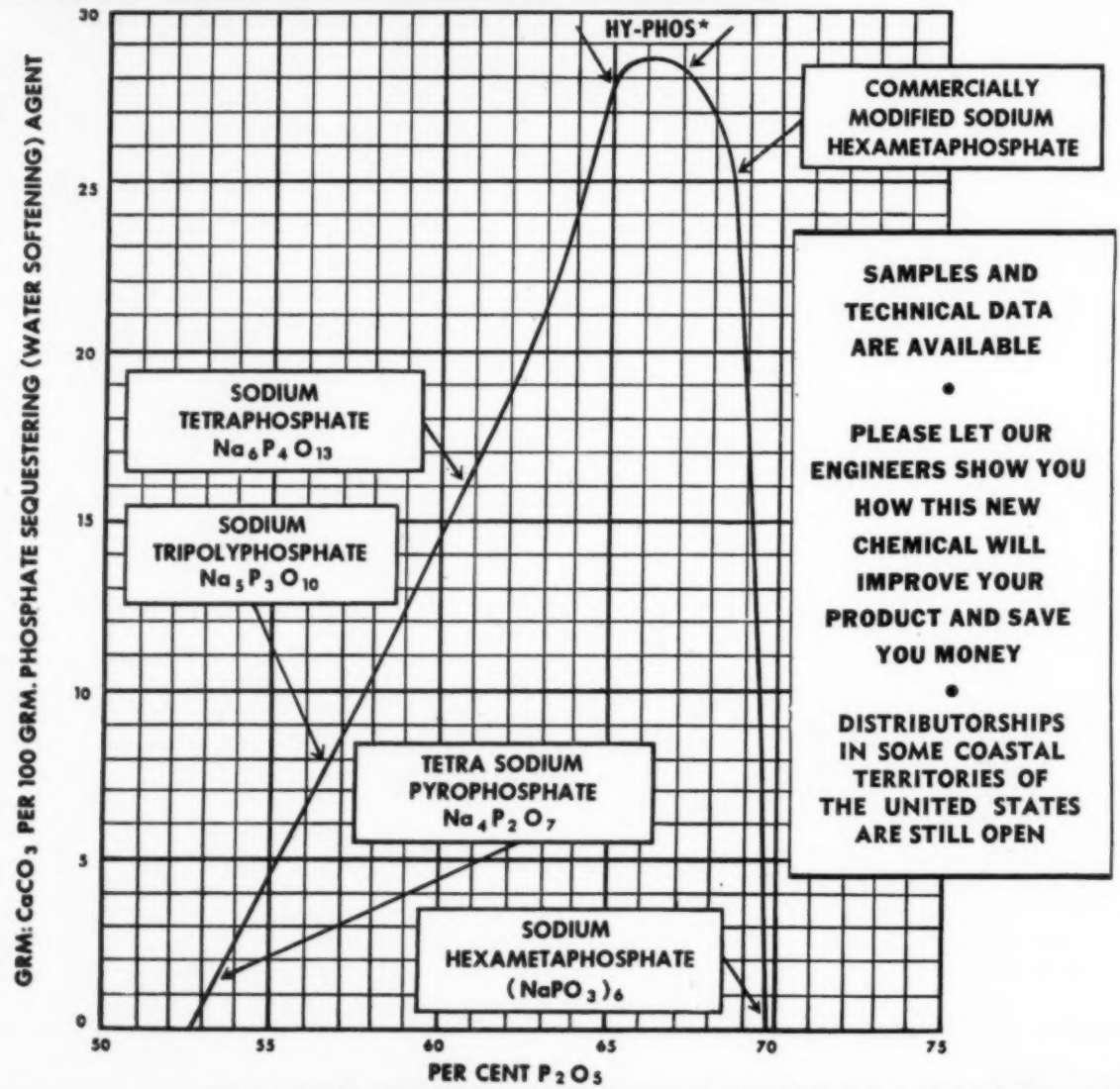
An anniversary dinner was given in Antoine's restaurant. One day was spent at Bogalusa, La., where the drum manufacturers were the guests of Gaylord Container Corp. The next meeting of the association is scheduled to be held at the Drake Hotel, Chicago, April 16 and 17.

HY-PHOS*

THE AMAZING NEW SODIUM GLASSY PHOSPHATE

FOR-

- SOAPS AND DETERGENTS
- TREATING DRILLING MUDS
- DISH WASHING
- TEXTILE PROCESSING
- WATER TREATMENTS
- CLEANING COMPOUNDS
- BOILER WATER COMPOUNDS
- METAL CLEANERS
- MAKING SOAP POWDERS
- ETC.



CALCIUM SEQUESTERING (WATER SOFTENING) PROPERTIES OF COMPLEX PHOSPHATES USING SOAP AS AN INDICATOR

SAMPLES AND TECHNICAL DATA ARE AVAILABLE

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PLEASE LET OUR ENGINEERS SHOW YOU HOW THIS NEW CHEMICAL WILL IMPROVE YOUR PRODUCT AND SAVE YOU MONEY

•

DISTRIBUTORSHIPS IN SOME COASTAL TERRITORIES OF THE UNITED STATES ARE STILL OPEN

U. S. PATENT NO. 2,574,047 GRANTED NOV. 6, 1951

* Trade-Mark

AMERICAN DYEWOOD COMPANY,

374 MAIN STREET, BELLEVILLE, N. J.

New Cleaners at Dairy Show

THE Dairy Industries Exposition held at the Navy Pier, Chicago, Sept. 22 to 27, featured the part which sanitation chemicals play in maintaining the standards of cleanliness in the industry. From the farm, through the processing plant, to the retailer's display case, chemicals are used. All along the way milk handling and processing requires large amounts of detergents, disinfectants, deodorants, germicides, insecticides, sanitizers and cleaning compounds. Many of these products are tailored to meet specific conditions, manufacturing techniques or handling problems common in the milk industry today.

Most recent development in dairy processing plant operations is the new "cleaning-in-place" system of sanitizing pipes and fittings that carry milk through the machinery in which it is processed.

Until recently, dairy machinery, with all its intricate piping, had to be dismantled at the end of each day's run for scrubbing and scalding. Today, because of the use of new detergents, milk processors are cleaning their machinery milk lines effectively without daily dismantling and setting up of their equipment.

Detergent manufacturers at the Chicago show explained that, since possibilities of skin irritations can be disregarded, these new compounds designed for in-place cleaning can be formulated at a greater strength than hand type detergents, while the chemical activity of the cleaners can be increased by maintaining temperatures of the solution far higher than the 125° F. maximum to which hand cleaning is limited. To avoid film formation on equipment, the in-place compounds also include water conditioning elements that are effective in a wide range of water hardness. For best results one manufacturer is recommending, in general, that the cleaning procedure be carried out by alternating between an organic acid detergent and an alkaline detergent.

Down on the dairy farm, the farmer, too, is getting acquainted with the new detergents, scouring powders and sanitizing agents. Electric milking machines, of course, have long required careful cleaning with suitable chemicals.

Among the more than 400 exhibitors on Navy Pier's two miles of display space were nine manufacturers of sanitation chemicals and dispensing equipment for the dairy industry, some of which were presented for the first time in public.

Diversey Corp., Chicago, displayed two new detergents, "Tembrite" and "Dilac," for in-place dairy plant cleaning, also a new product, "Spectak," for bottle washing, which prevents milk stone formation. Shown also, for the first time was Diversey's "Divomatic" electronic solution control device for can washing machines. In the 2,400 square feet of booth space required for the company's display were several stainless steel tanks such as are coming into use on farms. Cleaning several products for these tanks were suggested. Other products presented included bactericide-disinfectants, milk stone removers, neutralizers, insecticides, etc. During the show interested visitors were given trips through the company's plant at 1820 Roscoe St. Some 300 field representatives from the United States and Canada were called in to visit the show and attend a two-day sales conference at the Sheraton Hotel, presided over by W. E. Noyes, vice president for sales.

Klenzade Products, Inc., Beloit, Wis., displayed two new in-place cleaning detergents, for processing plant or farm use and distributed a 12-page booklet dealing with in-place cleaning procedures. Among new equipment displayed for the first time to dairymen was an electronically operated diaphragm-type feeder device, the "Chlor-O-Mite" pump for treating small water supply systems on farms. Another device distributed by Klenzade was a fog sanitation gun used with sodium hypochlorite or quaternaries in tank trucks, storage tanks, milk cans and processing vats. Other products shown included germicides and detergent-sanitizers, organic acid cleaners, wetting agents, bricks, etc. C. B. Shogren, vice-president for sales, headed the staffs in the booth.

E. F. Drew & Co., New York, showed their line of detergents for dairymen, including an all-purpose general cleaners, alkalis, detergent cleaner for general operations, a detergent-sanitizer for food plant equipment, a heavy duty acid cleaner for milkstone removal, can cleaners, including a liquid neutral organic detergent effective in hard water. Also shown was Drew "Lube," a water soluble cocoanut potash soap for lubricating and cleaning bottle conveyor lines. Edible products for the ice cream industry were also presented, with Drew's Vitamin D for milk fortification. K. W. Hartman, vice-president, and Larry Little, manager, dairy and special products division were on hand at the show.

Pennsylvania Salt Mfg. Co., Philadelphia, exhibited their complete line of dairy sanitation chemicals, including can cleaning alkalis, water conditioners, bottle washing compounds, manual cleaners and others. In charge was S. H. Crounse, sales manager, B-K division.

Oakite Products, Inc., New York, featured demonstrations of a new chain lubricant in paste or liquid form, the latter for use in hard water areas. Also shown was the full line of detergents, sanitizers, etc., for can and bottle washing, milkstone removal and other dairy sanitation purposes. Along with products for floor and equipment cleaning. In charge was D. X. Clavin, New York division manager, and K. C. Tucker, head of the food division.

Mathieson Chemical Corp., Baltimore, introduced a new hypochlorinator unit with metered water feeder for use with the company's HTH tablets. After long testing in water works and swimming pools this device is now being introduced in the dairy field, for chlorinating vats and tanks, it was announced. In charge was A. E. Wennerstrom, manager of Mathieson's HTH division

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. . . A FRAGRANCE that leaves a faint
but unmistakable suggestion
of healthy cleanliness
to the user's hair and scalp?
Our laboratories have produced
an excellent selection of such odors . . .
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that will give your product
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Our entire line of perfumes for hair cleansers
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and a suggestion of odor preference,
we'll be glad to select and send you samples.

FRITZSCHE *Established* 1871
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BRANCH OFFICES *and* *STOCKS: *Atlanta, Georgia, Boston, Massachusetts, *Chicago, Illinois, Cincinnati, Ohio, Cleveland, Ohio, *Los Angeles, California, Philadelphia, Pennsylvania, San Francisco, California, *St. Louis, Missouri, *Toronto, Canada and *Mexico, D. F. FACTORY: *Clifton, N. J.*

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LAUNDRY SOAPS

LIQUID SOAPS

PARA BLOCKS

SCOURING POWDERS

TOILET SOAPS

ETC.

since its inception some time ago.

Solvay Process div., Allied Chemical & Dye Corp., New York, exhibited bottle washing alkalis and cleanser, caustic soda, calcium chloride, etc., for dairy sanitation with Robert Herron, technical service manager, in charge.

Diamond Alkali Co., Cleveland, also showed their complete line of engineered detergents and bottle washing compounds with kits for control and testing of sanitary conditions. C. W. Turner, supervisor of dairy specialties sales, in charge.

Wyandotte Chemicals Corp., Wyandotte, Mich., displayed an elaborate model of dairy plant equipment for demonstrating use of company products for in-place cleaning. Introduced at the show were four new products: "Plurac," an alkaline cleaner for hot milk processing equipment; "Anti-bac," new chlorine germicide; "Kelvar," an all-purpose neutral cleaner; and "Nu-Flo," a cream acidity standardizer for the butter maker. Fred Tholen, sales manager, J. B. Ford div., in charge.

Drew Issues Folder

E. F. Drew & Co., New York, recently issued a bulletin listing characteristics, general properties, solubilities, applications, as well as records of performance of plasticizer "DP-250" in three representative types of resins. The folder may be obtained by writing to the firm's technical products division.

Purex Reports Earnings

Purex Corp., South Gate, Calif,. recently reported for the fiscal year ended June 30, 1952, net income of $267,303, or 53 cents per share, on sales of $17,632,629. For the preceding year net was $902,800 or $1.80 a share, and sales totaled $19,476,366. Profit for the latest year does not include net of $199,254 after taxes on the sale of the company's former St. Louis plant.

Total expenditures in the 1952 period for plant and equipment additions amounted to $1,082,000 of which $1,000,000 was for the firm's new detergent plant at St. Louis.

Vicklund in New Post

Appointment of R. E. Vicklund as manager of sales and development of Sindar Corp., New York,

R. E. VICKLUND

was announced recently by E. R. Durrer, executive vice-president. Mr. Vicklund, a graduate of Michigan College of Mining and Technology, joined Sindar in 1950 as a technical representative. Previously he engaged in associations which included work in the fungus control section of Engineer Research and Development Laboratories.

Fritzsche Fetes Dr. Hamann

Dr. Edmund H. Hamann, chief chemist in charge of flavor research, Fritzsche Brothers, Inc., New York, recently completed 25 years of service with the firm and thus became a member of Fritzsche's Quarter of a Century Club. The occasion was marked by a luncheon attended by F. H. Leonhardt, company president and oldest active member of the club; his secretary, Mary G. Neary; vice-presidents John H. Montgomery, H. P. Wesemann, and Fred Leonhardt, Jr.; and Comptroller G. A. Wohlfort. Dr. Hamann was presented with a government bond and scroll from the officers and directors, and with a gold wrist watch from his fellow workers.

Dr. Hamann, whose father was a Fritzsche salesman, was the recipient of a Fritzsche fellowship for research in organic chemistry under the direction of Professor Marston T. Bogert. After completion of his studies he joined Fritzsche in 1927.

New East Coast Detergent

East Coast Soap Corp., Brooklyn, N. Y., recently announced the development of a new all-purpose synthetic detergent which is now in full production. The new product, "H. W. 25 Synthetic Washing Powder," is a low cost powder designed for use in hotels, office buildings, diners, restaurants, hospitals and other institutions. It is made for distribution through jobbers and is packaged in 100 pound containers and 250 pound barrels and is usable in all types of water.

Expands Soda Ash Plant

Solvay Process Division, Allied Chemical & Dye Corp., New York, recently announced a second step in the modernization and expansion of its soda ash manufacturing facilities in Syracuse, N. Y. According to A. B. Chadwick, president, the project involves construction of a near duplicate of the recently completed soda ash plant, at an expenditure of over $100,000. Preliminary work is to start immediately and the job is expected to be completed in two years.

The initial unit of the new soda ash plant was planned with extension in mind, and part of the old plant, built in 1912 and still in operation, will be razed to make way for this latest addition. The new building will equal a fifteen story office building in height.

Detergents Plant in Peru

The first plant to produce detergents in Peru began operations in Lima in August, 1952, according to a recent report. The cost of the factory is estimated at 3,000,000 soles, approximately $180,000.

Lever Advances Two

Pepsodent Division of Lever Brothers Co., New York, recently announced appointments of Edward R. Fatzsinger as food store manager and William Dodenhoff as division sales manager for New York. Mr. Fatzsinger has been with Lever since 1941, most recently in the post of division sales manager in Atlanta. Mr. Dodenhoff has been with the company since 1950.

NEW LIGHT ON AN OLD SUBJECT*

Bringing new light to bear on the varied uses of

its products is part of Niagara's service to industry.

NIALK® Caustic Potash

This product is being used by many soap makers as an aid in the development of more efficient and economical processing techniques since its traditional quality and purity are particularly helpful in assuring the production of top quality soaps.

Quality plus cooperation keeps NIALK products at the forefront in research and product improvement.

NIAGARA ALKALI COMPANY

60 East 42nd Street, New York 17, New York

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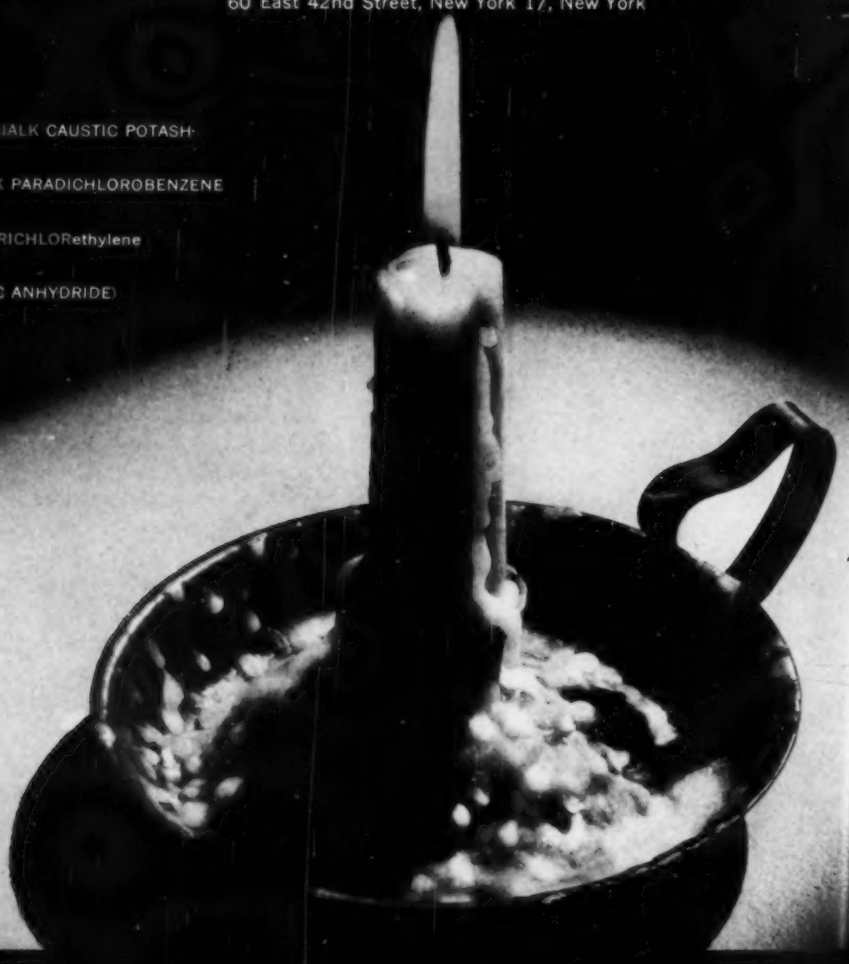
NIALK CARBONATE OF POTASH NIALK PARADICHLOROBENZENE

NIALK CAUSTIC SODA NIALK TRICHLORethylene

NIAGATHAL® (TETRACHLORO PHTHALIC ANHYDRIDE)



New Toni Labs

Toni Co., Chicago, dedicated its new research laboratories in the Merchandise Mart recently with ceremonies participated in by company executives, representatives of the Gillette Co., of which Toni is a division, and others. The new laboratory occupies 10,000 sq. ft. of space adjacent to the company's executive offices.

Wyandotte Names Orr

Stephen T. Orr, vice-president of Wyandotte Chemicals Corp., Wyandotte, Mich., and for 25 years in charge of the firm's manufacturing and operating activities, has been made a member of the president's staff with the rank of vice-president, it was announced recently. He is succeeded in his manufacturing responsibilities by Frank Wolcott, his immediate assistant, who becomes general manager of manufacturing, Michigan Alkali Division.

Mr. Orr joined Michigan Alkali in 1906 when he was graduated from Michigan State College. He succeeded his father, William T. Orr, as general manager. Mr. Wolcott joined Wyandotte two years ago as general manufacturing manager; he was previously with New Jersey Zinc Co., New York.

Gair Personnel Changes

Changes announced recently by Robert Gair Co., New York, include the appointment of Russell D. Scribner as division manager at its Thames River (New London, Conn.) mill and box shop. At the same time Gair announced that John H. MacLeod, vice-president in charge of sales for Hinde & Dauch Paper Co., Sandusky, O., has joined the container division as special representative. James How has been named assistant to the manager of industrial relations in the New York office. Formerly he was personnel manager at Gair's Boston Corrugated Box Division, Cambridge.

Advances Mrs. Belmont

Appointment of Mrs. Edythe B. Belmont as packaging consultant for all divisions, including Pepsodent, Good Luck, and Harriet Hubbard Ayer, was announced recently by Lever Brothers Co., New York. She was formerly product packaging and merchandising consultant for Harriet

MRS. E. B. BELMONT

Hubbard Ayer division of Lever, which she joined in 1947.

New Hooker Office

Hooker Electrochemical Co., Niagara Falls, N. Y., has opened a new sales office in Chicago, to serve its midwestern customers when its new $12 million caustic soda and chlorine plant gets into full operation at Montague, Mich.

Surveys made preliminary to the construction of the plant indicated that the factory site, near Muskegon, Mich., is underlaid by "enough salt to last the company 4,000 years," according to R. L. Murray, president of the Hooker company. One well was completed in August and others are being drilled, he announced. Located on the east shore of Lake Michigan, the enterprise is easily accessible to Chicago and consumers there of the company's varied products are being promised a considerable reduction on freight delivery charges.

Wiemer Heads Association

Cincinnati Drug and Chemical Association recently elected Paul N. Wiemer, Jr., owner of Taylor Greenwald Co., Norwood, O., as president. Other officers for the ensuing year are Owen G. Sexton, vice-president, Vernon B. Tucker, secretary and Lawrence J. Meiners, treasurer. Trustees elected include Walter M. Eller, John C. Hutchison, S. E. Spencer, Jr., and Frank D. Nowland, past president.

Peet Travelers Aid Chmn.

Roy W. Peet, manager and secretary of the Association of American Soap & Glycerine Producers, Inc., was recently named chairman of the Soap Division of the 1952 fund raising drive of the Travelers Aid Society of New York.

At Beauty, Barber Show

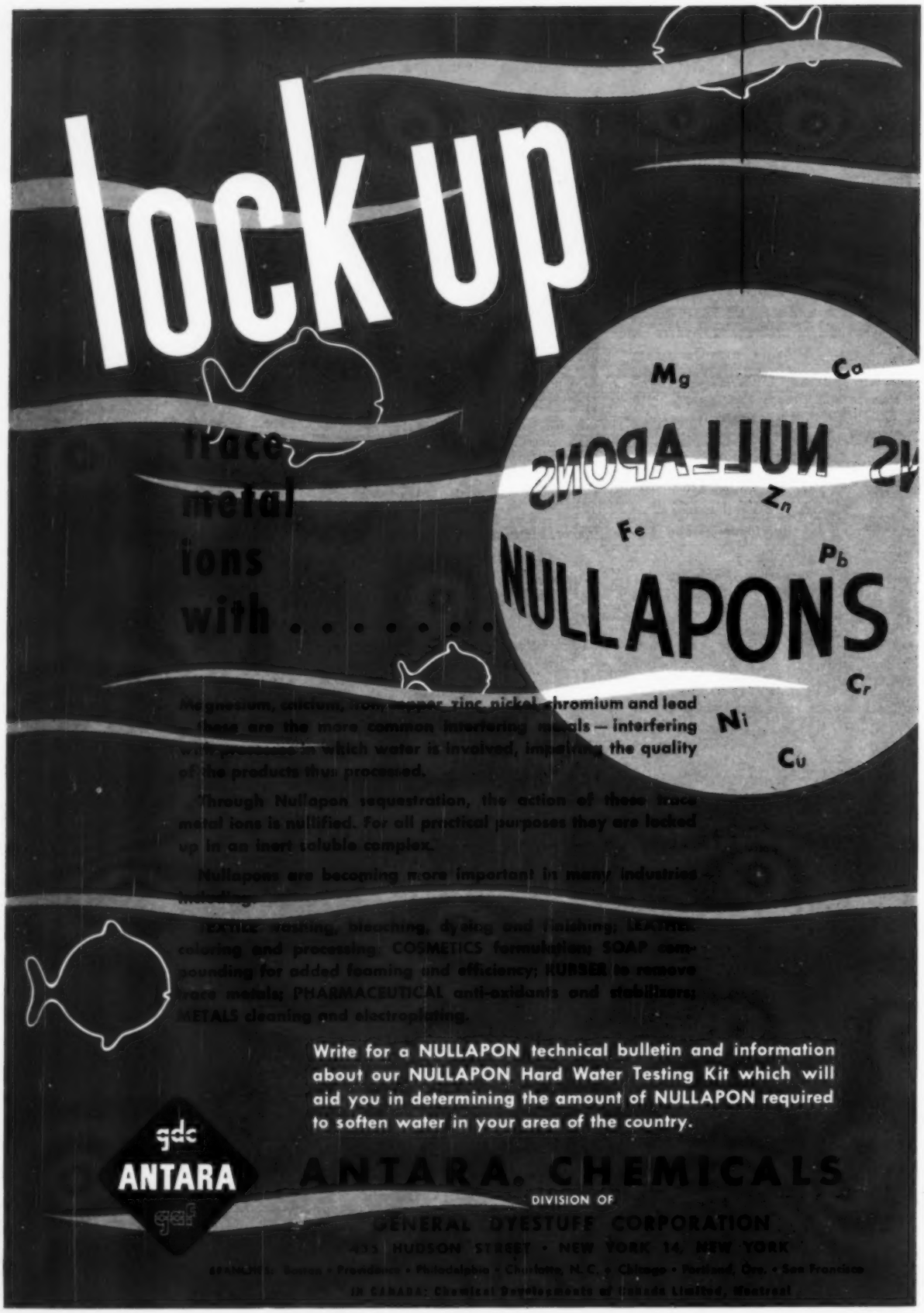
Manufacturers of soaps, shampoos, hair tonics, dentifrices and beauty preparations participated recently in the trade show staged in connection with the 48th annual convention of the Beauty and Barber Supply Institute in Chicago. Noted among exhibitors were the following: Amole, Inc., Dayton, O.; Associated Brands, Brooklyn, N. Y.; Boyer Laboratories, Chicago; John H. Breck, Springfield, Mass.; Bristol-Myers Co., New York; Colgate - Palmolive - Peet Co., Jersey City, N. J.; Helene Curtis Industries, Chicago; Fitch Co., div. of Grove Labs., St. Louis, Mo.; Harley Soap Co., Philadelphia; Noxzema Chemical Co., Baltimore; Procter & Gamble Distributing Co., Cincinnati; Rapidol Distributing Corp., New Hyde Park, N. Y.; Trylon Products Corp., Chicago; Wildroot Co., Buffalo.

Anderson Expands

William G. Anderson, Inc., Dallas, manufacturer of "Kwik Kleen", all purpose cleaning compound recently announced its removal to 3319 Knox. The new quarters provide larger offices, manufacturing, and warehousing facilities for the organization which was incorporated last February. Distribution of "Kwik Kleen" on a nationwide basis is to start next year according to William G. Anderson, president. Other officers include Rick Strong, board chairman; Bert Anderson, vice-president; Don Crouch, production manager.

Cooley Joins Norda

Appointment of Paul L. Cooley as Pacific Coast manager with headquarters in San Francisco, was announced recently by Norda Essential Oil & Chemical Co., New York. Mr. Cooley has been with George Lueders for the past 22 years.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trace metal ions with . . . . . .
Mg
Ca
Zn
Fe
Pb
NULLAPONS
Cr
Ni
Cu
Magnesium, calcium, iron, copper, zinc, nickel, chromium and lead these are the more common interfering metals — interfering with processes in which water is involved, impairing the quality of the products thus processed.
Through Nullapon sequestration, the action of these trace metal ions is nullified. For all practical purposes they are locked up in an inert soluble complex.
Nullapons are becoming more important in many industries including:
TEXTILE washing, bleaching, dyeing and finishing; LEATHER coloring and processing; COSMETICS formulation; SOAP compounding for added foaming and efficiency; RUBBER to remove trace metals; PHARMACEUTICAL anti-oxidants and stabilizers; METALS cleaning and electroplating.
Write for a NULLAPON technical bulletin and information about our NULLAPON Hard Water Testing Kit which will aid you in determining the amount of NULLAPON required to soften water in your area of the country.
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BRANCHES: Boston • Providence • Philadelphia • Charlotte, N.C. • Chicago • Portland, Ore. • San Francisco
IN CANADA: Chemical Developments of Canada Limited, Montreal

Charabot Opens N. Y. Office

Charabot & Cie., Grasse, France, represented in the United States for many years by a New York essential oil house, recently opened offices at 132 Nassau Street under the name of Charabot & Co., Inc. This firm is a successor to Hugues Aine. Maurice G. Gouderchet is president of the company, which is the sole distributor in the U. S. and Canada for Charabot and Hugues Aine products.

O'Connell Joins Trendex

W. J. O'Connell, in charge of the fatty acid division of Vegetable Oil Products Co., Wilmington, Calif., until his resignation in August, recently joined Trendex Co., Memphis, Tenn., as executive vice-president, it was announced last month by Sam Cooper, president. Mr. O'Connell has spent approximately 20 years in the fatty acid industry, first becoming associated with W. C. Hardesty & Co., New York, in 1932. In 1939 he was elected vice-president in charge of Hardesty's western operations. Later he became vice-president of Vegetable Oil Products Co., when that company acquired the western operations of Hardesty.

Trendex Co. is a wholly owned subsidiary of National Dairy Products Corp. and operates under the direction of HumKo Co., also a wholly owned subsidiary. Trendex obtains its principal raw materials from by-products of HumKo Co.

Solvay Advances Meek

Appointment of Arlington R. Meek to the post of assistant to general traffic manager, Solvay Process Division, Allied Chemical & Dye Corp., New York, was announced recently. Mr. Meek has been plant traffic agent at Solvay's Detroit works for the past fourteen years. He is being succeeded in that post by Henry F. Millatz, who has been Solvay's assistant Detroit traffic agent since 1943. Mr. Millatz has been continuously employed by Solvay since 1913.

Mr. Meek has been in Solvay's employ for the past twenty-six years, starting as a clerk in the New York office. In 1935 he was appointed division traffic agent at Solvay's Baton Rouge, La., plant, and came to Detroit in that capacity three years later.

CP Offers New Plant

Consolidated Products Co., New York, announced recently that it has facilities for custom fabrication of new stainless steel chemical processing equipment. The firm supplies to specifications storage and pressure tanks, ribbon mixers, jacketed kettles, distillation columns, heat exchangers, all type agitators, vacuum vessels, reactors, shell and tube condensers, filter presses, stills, and other special equipment.

Wyandotte Advances Four

Michigan Alkali Division, Wyandotte Chemicals Corp., Wyandotte, Mich., recently announced appointment of three product managers: R. K. Rigger for synthetic detregents; R. C. Leonard for caustic soda and chlorine; and P. M. Bigley for soda ash, dry

R. K. RIGGER

R. C. LEONARD

ice and bicarbonate of soda. T. R. Boyle becomes administrative assistant to the president of the Michigan Alkali Division.

Mr. Rigger manages the newly created department of synthetic detergents. Formerly assistant manager of the organic chemicals department, Mr. Rigger has been on the Wyandotte sales staff since 1948. He is a graduate of Princeton University.

P. M. BIGLEY

T. R. BOYLE

Unilever Expands in Italy

A merger is reported between S. A. Fratelli-Lever, Milano, and S. A. Stabilimenti Italiani Gibbs. The latter has a share capital of 40 million lira. The merger raises the share capital of S. A. Fratelli-Lever from 68 million to 97.4 million lira. The issue of 18,425 shares at a par value of 1,600 lira is to serve as replacement for the Gibbs shares which are in circulation.

Polak Offers New Aromatic

"Phantolid," a new aromatic, was recently placed on the market by Polak's Frutal Works, Middletown, N. Y., and associated companies in Holland, England and France. The new product exhibits a characteristic, long-lasting tonkin-musk odor, similar to that of large ring lactones and ketones of the cyclopentadecanolid type, according to a circular issued by Polak's Frutal Works. In addition, the manufacturer claims the new compound to be completely stable in soap, does not discolor soap and creams, is readily soluble in paraffin oil and other organic solvents, and—according to all tests made to date—to be non-irritating to the skin.

A patent application for "Phantolid" has been filed. Its chemical structure is therefore currently undisclosed, but it is thought to be that of a high molecular ketone. Possibly Polak's Frutal Works' chemists have come up with a new chemical configuration with new olfactory properties that might open up a new family of chemical compounds for perfuming.

Through its good fixing properties the product should suggest itself for many large-scale applications as a new fixative, irrespective of its odor. "Phantolid" compares favorably in price with other musk aromatics of the cyclopentadecanolid type; it is being offered at $10.00 per pound, f.o.b. Middletown.

Reasonable cost, high solubility, and light stability fit this aromatic, according to the manufacturer, for incorporation in white soap and cosmetic creams. Graphs, appended to the circular, demonstrate "Phantolid's" light stability in soap and solubilities in various solvents.

G-11®

(*brand of hexachlorophene*)

the first and only proven, effective and non-irritating antiseptic chemical for soaps

Are you taking advantage of the tremendous opportunities G-11 offers for new sales? Its germicidal, antiseptic and deodorizing effectiveness has been proved by years of successful use in many leading brands of soaps and detergents. The market for products containing G-11 is constantly growing—and virtually unlimited!

G-11 is now being used successfully in

liquid and bar soaps

powder soaps

waterless hand cleansers

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synthetic detergents

A bulletin will be sent on request.

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Hexachlorophene is a development of Sindar Research Laboratories

New Detergents at Chemical Exposition

MANUFACTURERS of soaps and sanitary chemicals were introduced to many new and re-acquainted with multitudes of other products by the more than 200 exhibitors who crowded every available foot of display space at the seventh biennial National Chemical Exposition in the Chicago Coliseum recently.

U. S. Industrial Chemicals featured a new caustic soda, added recently to its line, but stressed also alcohols, ethers, esters, insecticide and insectifuge materials among other major products. George Stanton, Chicago division manager, in charge.

Swift & Co., Chicago, presented its new "Lexard" superfatted toilet cake with G-11, which has been on the market since March and is sold only to institutions and industrial establishments. Chips, powders and flakes from Swift's soap line were also presented, with adhesives and industrial oils. In charge were M. L. Westering, manager, soap department, F. E. Lacey, manager, industrial oils and Al Steffen, manager, adhesives.

National Aniline div., Allied Chemical & Dye Corp., New York, listed eleven new organic chemicals for varied industrial uses, also its line of synthetic detergents, but focused attention on a giant animated flow scheme chart tracing aniline from its basic raw materials to the end products. Dr. O. M. Morgan, manager, synthetic detergents sales, in charge.

Alrose Chemical Co., Providence, R. I., emphasized its sequestrene compounds which, since their introduction about three years ago, are being widely used, among other applications, to prevent clouding and precipitation in liquid soaps. A new 54-page booklet describing and discussing the nature and actions of sequestrenes for varied industrial uses, was distributed. In charge of the exhibit were H. W. Zussman, vice-president, and Ralph E. Kaye, Chicago sales manager.

Davison Chemical Corp., Baltimore, Md., distributed a product data sheet dealing with a new line of organic silicofluorides, made commercially available since Sept. 1, which, among other industrial uses, were said to have potential value as insecticides, fungicides, mildewcides and mothproofing agents. In charge was R. N. Williams.

Armour & Co.'s chemical division had a colorful and dramatic exhibit stressing uses for its "neo-fat" fatty acids from corn oil, cottonseed and soybeans. A new chart, prepared for the show was distributed, giving specifications and technical data on the products. In charge were Dale Stingley, of the laboratory staff and Harry Lenz, sales manager, chemical division.

Victor Chemical Works, Chicago, showed for the first time, a number of new organic phosphate compounds along with multitudes of other products. To encourage audience participation Victor's advertising manager, E. M. Myers, provided a miniature railroad system, occupying 240 sq. ft., on which visitors could operate model railroad trains. Each train automatically stopped at tiny replicas of Victor's different industrial plants, then members of the sales staff, under M. R. Stanley, director of sales, took over, to explain what is produced at those points and how it is used. A folder was distributed describing 45 Victor research chemicals which are not yet well known items of commerce.

General Electric Co.'s chemical division had a large staff of specialists from its silicone headquarters at Waterford, N. Y., to explain the "G-E Silicone Story," including applications and advantages of these new products.

Monsanto Chemical Co., St. Louis, put on another novel audience participation show, modeled with variations on the popular game of Bingo, which helped to familiarize visitors with the names of 85 of Monsanto's 450 products. Decks of playing cards and a set of this "Chemistry Game" were given as prizes. F. Luckett, Chicago branch manager, in charge.

Commercial Solvents Corp., New York, had a display showing in three-dimensional diagrammatic form the syntheses of chemicals from natural gas, topped by a giant live gas flame to symbolize the large part played by petro chemicals in the company's operations. CSC's "Blueprint for the Future," a booklet telling of expansion plans under way at different localities, together with product literature, were presented to visitors.

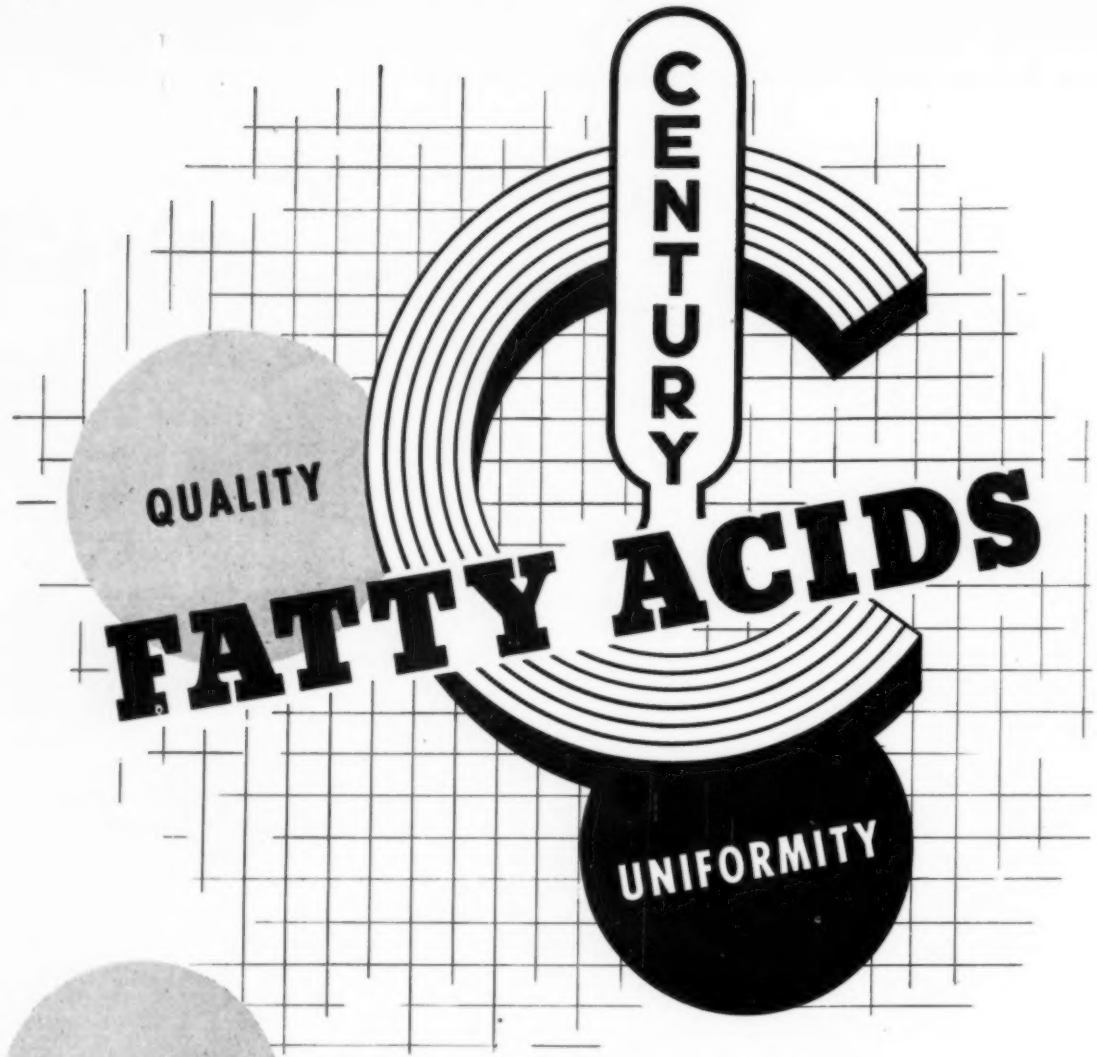
Oronite Chemicals, featured detergents, wetting agents and other products and also showed samples of new products that are still in the development stage, including dispersants, surfactants, germicides and others.

Displays of water treatment chemicals and systems were displayed by several exhibitors and there was an almost endless array of specialized chemical processing machinery, laboratory equipment and supplies. Among exhibitors were representatives of chemical industries from Belgium, Germany and other overseas points.

The Atomic Energy Commission provided a display with hourly demonstrations of the peacetime applications of atomic energy and two conference programs with ten speakers covered the subject. At another afternoon conference "The Future of Chemistry" was discussed by several speakers, including Dr. Foster Dee Snell who surveyed the prospects for future growth of synthetic detergents.

Rounding out the five-day program of this "world's fair of chemistry," was the Chemical Trail Blazers exhibit presenting some fifty of the newest developments in applied industrial chemistry and chemical technology. Frequent showings were made of some 25 industrial movies portraying chemistry's part in the national economy. One other feature of the show was the 2nd International Exhibition of painting made by chemists in their leisure hours.

Sponsor of the big Chicago show was, as in the past, the Chicago section of the American Chemical Society. H. W. Schultz of Swift & Co., was chairman of the general committee which engineered the project to another successful conclusion.



CENTURY OLEIC ACID—A grade to match your needs—from regular Red Oil to low titer White Oleic—Century Oleic is the standard of the industry because of its high quality and uniformity.

CENTURY 1425
Distilled Corn Oil Fatty Acid

A relatively low titer material particularly interesting in the manufacture of clear liquid and paste soaps.

CENTURY 1435
Distilled Cottonseed Fatty Acid

Where a higher titer, uniform quality fatty acid is desired, Century 1435 finds wide usage.

CENTURY 1445
Distilled Soybean Fatty Acid

A medium titer vegetable fatty acid of good stability, used extensively in specialty soaps.

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Bids and AWARDS

Wax Award to Trio

Trio Chemical Works, Inc., Brooklyn, won the award on 12,000 gallons of general purpose wax in a recent opening by Post Office Department, Washington, with a bid of 49 cents per gallon.

FSS Soap Paste Bid

Mione Manufacturing Co., Collingdale, Pa., was lowest bidder on 20,844 pounds of soap paste, with a bid of 5.5 cents per pound, in a recent opening for miscellaneous supplies by the Federal Supply Service, Washington, D. C.

Insecticide Award

The award on 3,400 gallons of insecticide was won by Martin Smith Chemical Corp., San Antonio, with a bid of $4.85 per gallon, in a recent opening for miscellaneous supplies by Army Quartermaster, San Antonio, Tex.

QM Soap Powder Bid

A recent opening for miscellaneous supplies by Quartermaster Office, New York, included 470,000 pounds of soap powder, hand scouring, item a, at origin, item b, destination 1, Schenectady; 2, Sharpe; 3, Atlanta; 4, Columbus, and 5, Richmond. Low bids were submitted by the following: Armour & Co., Chicago; item a, export, 9.85 cents, and domestic, 6.32 cents; item b 4, 6.99 cents, and b 5, 7.41 cents; Murro Chemical Co., New York, item a, export, 9.8 cents, and domestic, 7.8 cents; item b 2, 11.8 cents, b 3, 10.5 cents; S. & S. Soap Co., New York, item b 1, 8.64 cents.

Low Bids on Lindane

A recent opening for miscellaneous supplies by Navy Purchasing Office, New York, included item 1, 12,000 gallons of lindane concentrate, five-gallon drums, and item 2, 750,000 two-ounce cans of insecticide powder. Lowest bid on item 1 was submitted by Kolker Chemical Works Division of Diamond Alkali Co., Newark, N. J. with $7.21; on item 2 by Kusham Chemical Co., Los Angeles with 4.19 cents.

Insecticide Award

In a recent opening for miscellaneous supplies by Engineers Corps, Norfolk, Va., the award on 12,000 pounds of DDT went to Maxwell Insecticide Co., Raleigh, N. C., with a bid of 35 cents per pound.

Navy Naphthalene Bid

Lowest bid of 12.54 cents on 100,000 pounds of technical naphthalene flake was submitted by Standard Naphthalene Products, South Kearny, N. J., in a recent opening for miscellaneous supplies by Navy Purchasing Office, New York.

Sanitary Chemical Awards

In a recent opening for miscellaneous supplies by Army Ordnance Department, Aberdeen Proving Ground, Md., awards went to the Chase Products Co., Maywood, Ill., on aerosol insecticides, 50 cents each; Cleaning Supply Co., Baltimore, Md., 1000 disinfectant blocks, 7 cents; Carlea Janitor Supply Co., Baltimore, Md., on 2,500 gallons of floor wax, $1.07 each.

POD Cleaner Bids

A recent opening for miscellaneous supplies by Post Office Department, Washington, D. C., included cleaner, item 1, 80,000 pounds and item 2, 50,000 pounds. Lowest bids were submitted by Octagon Process, Staten Island, N. Y., with 7.2 cents on item 1, and by Theobald Industries, Inc., Harrison, N. J., on item 2 with 6.79 cents.

V.A. Soap Awards

Among winners of awards on 85,012½ pounds of soap in a recent opening for miscellaneous supplies by Veterans Administration, Procurement Division, Washington, D. C., were the following: J. Eavenson & Sons, Camden, N. J.; Mount Hood Soap Co., Portland, Ore.; Purity Soap & Chemical Co., Minneapolis; and Stahl Soap Corp., Brooklyn, N. Y.

FSS Scouring Powder Bid

In a recent opening for miscellaneous supplies by Federal Supply Service, Washington, D. C., lowest bidder on 15,480 pounds of scouring powder was Armour & Co., Chicago, with 6.2 cents per pound.

FSS Soap Awards

The Federal Supply Service, Cleveland, announced the following awards on soap bids in a recent opening for miscellaneous supplies: item 1, American Soap & Washoline Co., Cohoes, N. Y., 2.64 cents; items 2 and 3, Stahl Soap Corp., Brooklyn, N. Y., 10.86 cents and 8.72 cents.

Cleanser Award to Diamond

Diamond Chemical Co., Maspeth, N. Y., won the award on an unspecified amount of cleanser with a bid of 12.97 cents in a recent opening for miscellaneous supplies by U. S. Air Force Base, Tinker, Okla.

Post Office Award

In a recent opening for miscellaneous supplies by Post Office Department, Washington, D. C., the award on 50,000 pounds of sweeping compound went to Capital Supply Co., Austin, Tex., with a bid of 1.55 cents per pound.

Sweeping Compound Bid

Sanitary Soap Co., Paterson, N. J., submitted lowest bid, 2.18 cents per pound, on 120,000 pounds of sweeping compound in a recent opening for miscellaneous supplies by the Federal Supply Service, Washington, D. C.

Wax Award to Trio

Trio Chemical Works, Brooklyn, N. Y., won the award on 63,745 gallons of floor wax with a bid of 48.1 cents per gallon in a recent opening for miscellaneous supplies by Army Quartermaster Corps, Ft. McPherson, Ga.

The trend is toward better smelling products

Manufacturers are learning that, whatever their product, it **sells better** if it **smells better.**

Our perfume laboratory has developed many masking agents and perfumes* for all types of industrial and semi-industrial purposes such as laundry and dishwashing compounds, detergents, air purifiers, sprays, etc.

* **Perfumes** in the sense of supplying an agreeable odor.—NOT a "perfumy" note. Actually many of our perfume compounds are designed only to MASK the basic odor of the product, ridding it of any unpleasant effect and replacing it with a fresh clean note.

We have chemists who know **your** problems.
Write us and let us assist you.

SCHIMMEL & CO., INC.
601 West 26th Street, New York 1, N. Y.

NEW Trade Marks

THE following trade marks were published in recent issues of the *Official Gazette* of the U. S. Patent Office in compliance with section 12(a) of the Trade Mark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the *Gazette*. See rules 20.1 to 20.5. As provided by section 31 of the Act, a fee of $25 must accompany notice of opposition.

Rout—This for hand cleanser. Filed February 9, 1952 by Rubberset Co., Newark, N. J. Claims use since January 9, 1952.

Kind—This for detergent. Filed March 14, 1952 by Walter J. Diffley, Wilmington, Calif. Claims use since January 14, 1952.

Sprayway Bug-Go — This for insecticides. Filed July 19, 1950 by Tru-Pine Co., Chicago. Claims use since January 1950.

Han-Suds—This for cleaning and washing powder for china, glasses, etc. Filed February 1, 1950 by Harry S. Stevens, Baltimore, Md. Claims use since February 1949.

Soc—This for laundry detergent in powder form. Filed March 30, 1951 by VMB Chemical Co., Elmwood Park, Ill. Claims use since August 1, 1949.

Jet—This for soap. Filed July 20, 1951 by Armour and Co., Chicago. Claims use since June 21, 1951.

V-C Jet—This for synthetic detergent in powder form. Filed September 5, 1951 by Virginia-Carolina Chemical Corp., Richmond, Va. Claims use since June 7, 1951.

V-C Won—This for synthetic detergent in powder form. Filed September 5, 1951 by Virginia-Carolina Chemical Corp., Richmond, Va. Claims use since June 7, 1951.

Helen Wood—This for shampoo, cream and liquid. Filed November 8, 1951 by Amole Inc., Tipp City, O. Claims use since July 24, 1950.

Cleano—This for deodorizing cleaner and stain remover for toilet bowls, etc. Filed March 6, 1947 by Cut Kravagna, Los Angeles, Calif. Claims use since May 15, 1946.

Glide-X—This for liquid wax polish and cleaner compound for use on various surfaces. Filed November 25, 1950 by Avidon Lipsez, Somerville, Mass. Claims use since December 24, 1948.

Dri-Glo — This for furniture polish and metal polish. Filed March March 10, 1951 by John P. Roth, assignor to O'Cedar Corp., Chicago. Claims use since July 1939.

Glax—This for customized automobile glazing wax. Filed September 18, 1951 by Maenard D. Hall, Los Angeles, Calif. Claims use since January 1, 1951.

Martin's — This for creosote dips, disinfectants, insecticides, etc. Filed January 18, 1949 by C. J. Martin & Sons, Austin, Tex. Claims use since 1938.

Di-Gas—This for mildew retardant. Filed November 27, 1951 by Chester C. Irving, St. Petersburg Beach, Fla. Claims use since May 2, 1951.

H 52 — This for hexachlorophene. Filed April 26, 1952 by Lambert Co., Jersey City, N. J. Claims use since April 18, 1952.

National — This for synthetic organic sulfonate detergent compositions. Filed May 5, 1949 by Allied Chemical & Dye Corp., New York. Claims use since January 1932.

No-Boil — This for washing compound for use in cleaning clothes having incidental bleaching properties and for removing stains, cleaning floors, etc. Filed October 17, 1949 by No-Boil Fluid Chemical Co., Jamestown, N. Y. Claims use since July 1, 1927.

Kisses for Dishes—This for detergent for dishes. Filed December 20, 1950 by Brown Laboratories, Inc., Philadelphia. Claims use since December 20, 1950.

Bild-A-Glaze — This for paint cleaner. Filed March 23, 1951 by Harold L. Groves, South Gate, Calif. Claims use since January 1948.

Go Signal—This for cleaning solvent for fabrics, metals, cements, etc. Filed June 4, 1951 by Signal Oil Co., Los Angeles, Calif. Claims use since October 1948.

Swift's—This for cleanser used as a detergent. Filed June 26, 1951 by Swift & Co., Chicago. Claims use since June 1945.

Baby Jo—This for waterless soap. Filed July 26, 1951 by John W. Curtis, Topeka, Kans. Claims use since March 1, 1949.

Tod'l—This for detergent baby preparation. Filed November 21, 1951 by Sterling Drug, Inc., New York. Claims use since September 20, 1951.

Hyx—This for detergent and cleaner of rugs, fabrics, walls, and other surfaces. Filed January 24, 1952 by Hyx Cleaner Co., Dallas, Tex. Claims use since January 11, 1952.

Sur Chem—This for waxes and polishes for automobiles. Filed October 16, 1950 by Saul Moses, Baltimore, Md. Claims use since March 24, 1950.

Air King—This for household deodorant. Filed November 30, 1949 by Bostwick Laboratories, Inc., Bridgeport, Conn. Claims use since June 1, 1949.

Niagaramite — This for parasiticides. Filed January 10, 1951 by Food Machinery and Chemical Corp., San Jose, Calif. Claims use since July 31, 1950.

Kilchlor Dust—This for insecticides. Filed February 9, 1952 by Kilgore Seed Co., Plant City, Fla. Claims use since November 1947.

Tevvy—This for household deodorant. Filed February 13, 1952 by Tennessee Valley Chemical Corp., White Plains, N. Y. Claims use since May 15, 1950.

Kik—This for insecticide. Filed March 7, 1952 by Chemical Corp. of Colorado, Denver. Claims use since May 5, 1950.

Snow Flake—This for insecticides. Filed May 15, 1952 by Koppers Co., Pittsburgh, Pa. Claims use since April 29, 1952.

Stanhome — This for tooth pastes and powders, cleaning compositions, etc. Filed October 3, 1950 by Stanley Home Products, Inc., Westfield, Mass. Claims use since March 22, 1950.

Glo-co—This for toilet soap. Filed July 9, 1949 by Robert H. Cromwell Jr., Los Angeles, Calif. Claims use since 1940.

Lelong—This for toilet soaps. Filed July 19, 1949 by Lucien Lelong Inc., Chicago. Claims use since June 24, 1949.

Laundel—This for detergent for use on articles made of nylon, silk, linen, cotton, and/or wool. Filed December 10, 1949 by Henri Bendel, Inc., New York. Claims use since November 10, 1949.

Powrite — This for powdered cleaning agent for use in power operated washing equipment. Filed July 29, 1950 by Chester Whitfield Smith, Detroit, Mich. Claims use since July 15, 1949.

Ezy Day—This for sudsing cleaner, cleanser, and detergent. Filed April 6, 1951 by Hewitt Soap Co., Dayton, O. Claims use since September 10, 1930.

Lanomal — This for powdered lanolin soap. Filed April 20, 1951 by Richard A. Malmstrom, Brooklyn, N. Y. Claims use since April 4, 1951.

Royal — This for insecticides. Filed April 24, 1951 by Guaranteed Sanitation, Inc., New York. Claims use since November 1928.

Belmont's—This for household deodorants. Filed July 21, 1951 by Belmont Industries, Inc., Chicago. Claims use since on or about February 1943.

Pyrosteam—This for liquid insecticide. Filed February 18, 1952 by West Disinfecting Co., Long Island City, N. Y. Claims use since January 1, 1932.

Grapene—This for deodorizing fluids for use in drip machines. Filed February 18, 1952 by West Disinfecting Co., Long Island City, N. Y. Claims use since November 25, 1951.

Hi-Light—This for dishwashing compound. Filed June 18, 1948 by Economics Laboratory, Inc., St. Paul, Minn. Claims use since May 13, 1948.

COWLES CHEMICALS

DRYMET*

THE ECONOMICAL DETERGENT SILICATE

Cowles DRYMET, anhydrous sodium metasilicate, is the most highly concentrated form of sodium metasilicate available. DRYMET contains no water of crystallization. One pound of DRYMET is equivalent to 1.6 lbs. of sodium metasilicate pentahydrate. It is more economical to use, on the basis of both Na_2O (alkalinity) and SiO_2 (silicate) than any other type of hydrated or anhydrous detergent silicate, either compounded or by itself.

DRYORTH*

THE HEAVY-DUTY DETERGENT SILICATE

Cowles DRYORTH, anhydrous sodium orthosilicate, is a powerful, speedy, heavy-duty cleaner with valuable penetrating and wetting-out properties, reinforced dirt-removing power and unusual emulsifying action. It is an anhydrous, free-flowing powdered silicate containing not less than 60% Na_2O. DRYORTH is also used as an economical constituent of high pH cleaning compounds.

Also manufacturers of CRYSTAMET, pentahydrate sodium metasilicate and DRYSEQ, anhydrous sodium sesquisilicate.

We'll be glad to send you our DRYMET File Folder containing complete technical information and suggested formulations.

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WRITE US FOR THE NAME OF YOUR NEAREST DISTRIBUTOR.

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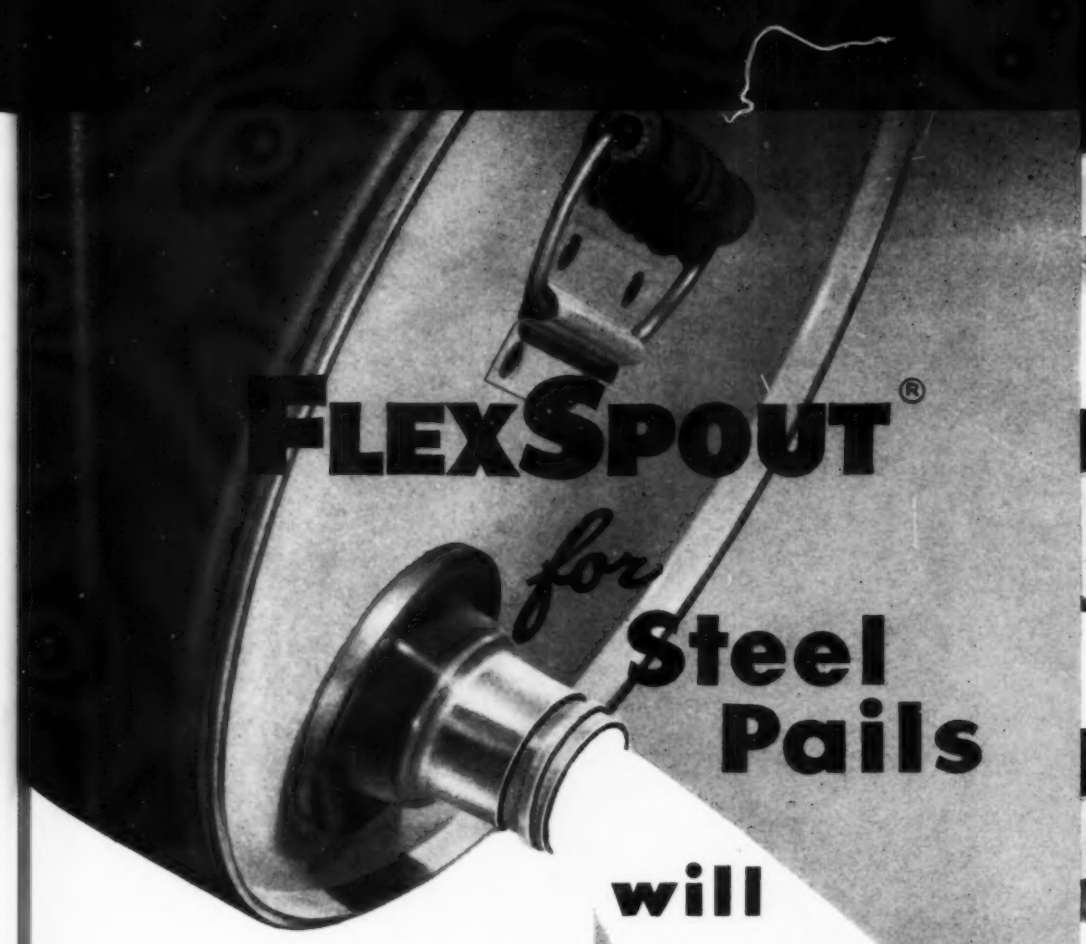
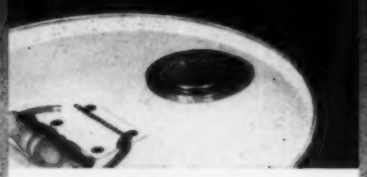


FLEXSPOUT® *for* Steel Pails

will help you sell MORE of your Product



LEAKPROOF—One-piece molded plastic, sealed directly on pail metal. Stronger than pail itself.

EASY TO OPEN—Without special tools. Nail, screwdriver or any sharp object does the job.

FLEXIBLE POURING SPOUT—Extends for easy pouring. No muss or fuss . . . because only inside of spout touches liquid.

RE-SEALS TIGHTLY—With plastic screw cap. Protects volatile liquids. Spout retracts for easy stacking.

FLEXSPOUT is a *lot* more than just another pail closure. It's a powerful sales tool that will help you sell *more* of any liquid packaged in steel pails. Every feature of this unique new closure adds up to customer satisfaction and extra sales appeal.

FLEXSPOUT is leakproof and tamperproof. It is easily opened with any pointed tool. It has a flexible pouring spout that extends for easy pouring, retracts out of the way for easy stacking and storage. A handy plastic screw cap permits tight, positive re-sealing.

Over 10,000,000 steel pails have been equipped with **FLEXSPOUT** during the past year. This better closure can do a better job for you, too. Write us today for further information . . . or fill out the coupon for a free sample.

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AUBURN, INDIANA

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Please send us... ☐ Free Sample ☐ Brochure

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- Sodium Methylate
- Sodium Chlorite
- Ammonium Sulphate
- Nitric Acid
- Dry Ice and Carbonic Gas
- Hypochlorite Products
- Hydrazine Products
- Ethylene Glycol
- Diethylene Glycol
- Triethylene Glycol
- Ethylene Oxide
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- Dichloroethylether
- Methanol*

*In production in 1952

Entering its 60th year as one of America's major chemical companies, Mathieson in 1952 will produce more basic chemicals and serve more vital industries than ever before in its history. From ammonia-soda process alkalies used by the early paper, glass, soap, petroleum and textile industries, Mathieson production has grown to include over 20 basic chemicals and their many specialized derivatives that today serve hundreds of manufacturers in this ever-expanding American economy.

Under current market conditions, a dependable source of supply is important. If your production requires any of these chemicals, you may be able to buy *to better advantage* by consulting with Mathieson now.

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CHEMICALS

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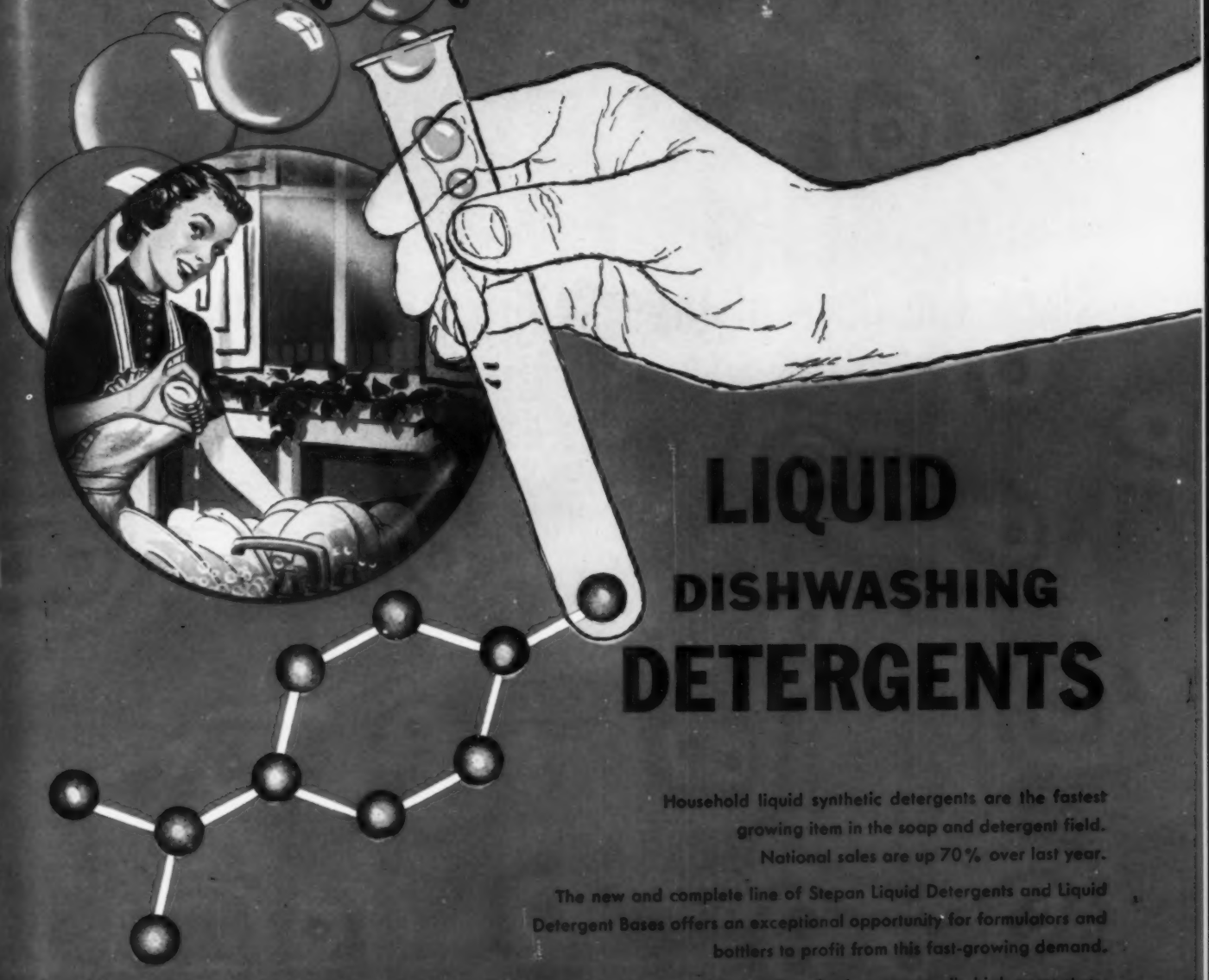

LIQUID DISHWASHING DETERGENTS

Household liquid synthetic detergents are the fastest growing item in the soap and detergent field. National sales are up 70% over last year.

The new and complete line of Stepan Liquid Detergents and Liquid Detergent Bases offers an exceptional opportunity for formulators and bottlers to profit from this fast-growing demand.

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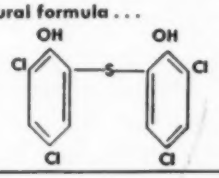

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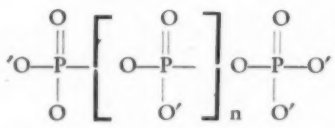
Metal Complexing Agents in Soap and Detergent Products

H. W. Zussman*
Alrose Chemical Co., Providence, R. I.

METAL complexing agents comprise perhaps the most important group of auxiliaries available to the soap and detergent industries. These products include sodium tripolyphosphate, consumed at the rate of more than 500,000,000 lbs. annually, and also—overshadowed by comparison, but nevertheless important—the organics such as ethylenediamine tetraacetic acid and the hydroxy acids.

The practical value of these materials is to a great extent determined by their general physical and chemical properties and by economic factors as well as by their specific metal complexing characteristics.

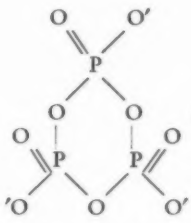
The polyphosphates are linear polymers prepared by dehydration of inexpensive sodium or potassium orthophosphates:



polyphosphate

Like the polyethyleneoxides, these products are not pure materials but mixtures of different chain length. For sodium tripolyphosphate, n = 1, for "tetrametaphosphate" n = 3 while "hexametaphosphate" is reported to be a very high molecular weight compound (12); increasing chain length is reported to have a negligible effect on metal complexing characteristics (12). Ring polymers (true metaphosphate) are also formed in carefully controlled dehydration reactions but are inactive as complexing agents (10). Related to these compounds are the imidophosphates in which —NH— groupings replace the oxygen bridges between the phosphorus atoms; their properties have not been too well studied, but they may be expected to behave like the polyphosphates; because of their relatively high price, they have found very limited use at this time.

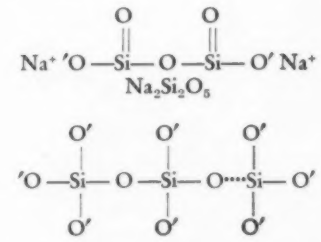
Depolymerization (hydrolysis) of the polyphosphates occurs in aqueous solution; this is usually too slow (3) to be significant in most detergent operations, but is sufficiently rapid



metaphosphate

to present a serious problem where shelf life of a formulated liquid product must be considered or where the application involves a high temperature standing bath. Hydrolysis is accelerated at elevated temperatures and is catalyzed by hydrogen ions (5). Interestingly enough, the calcium (5) and the magnesium (10) complexes of the polyphosphates hydrolyze far more rapidly than the sodium salts in alkaline solution. Colloidal in character and anionic, the polyphosphates precipitate cationic surface active agents; being inorganic, they have poor compatibility with aqueous solutions of soaps and organic detergents. To summarize succinctly, the polyphosphates are not well adapted for use in liquid soaps and detergents.

Rather remotely related to the polyphosphates are the silicates, also polymeric in character:



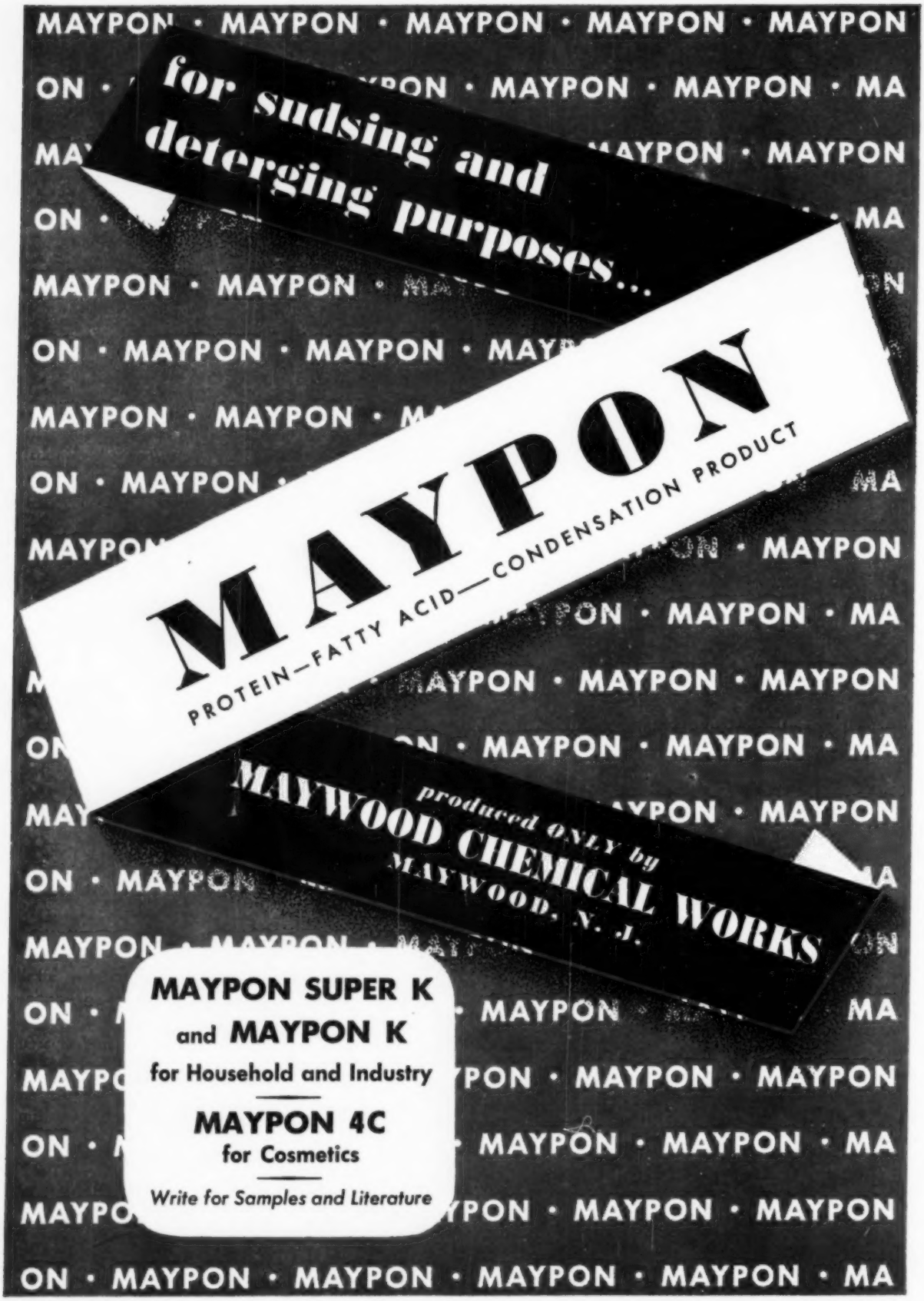
$Na_2Si_2O_5$

Products predominantly of the $Na_2Si_2O_5$ type in which the ratio of SiO_2/Na_2O is high are reported to solubilize iron in strongly alkaline solution (6). Certainly the silicates combine with Fe^{+++} to form colloidal anions, a matter of some importance in bleaching of textile fibers.

Most versatile of the metal complexing agents is ethylenediamine tetracetic acid (Sequestrene* (1) EDTA). Manufactured from chloracetic acid or from formaldehyde and cyanide with ethylenediamine, its cost on equal weight basis does not compare favorably with the

* Presented before 38th mid-year meeting C.S.M.A., Boston, June 9, 1952.

* Registered trade mark, Alrose Chemical Co.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polyphosphates. It is probable that for some time to come, EDTA cannot be considered a very serious competitor for sodium tripolyphosphate in the household detergent market. Its complete stability to hydrolysis and its excellent compatibility (as an ammonium or alkylolamine salt (with liquid soaps and detergents, including cationics, recommend the product's use in liquid formulations and in high temperature standing baths; its particularly powerful complexing properties make it useful in many situations where other complexing agents may fail.

Of the hydroxy acids, the most important is gluconic acid, used primarily in acid dairy detergents until its ability to form soluble alkaline earth complexes in strong alkali was noted recently (16). Gluconate is too weak a complexing agent for alkaline earths below pH 12 to be of any significant value in soaps and detergents. Citric acids behaves somewhat like gluconic acid in strong alkali, but is less effective; it is reported to be outstanding as a metal scavenger in fats and oils, thus retarding rancidity.

Oxalic acid might also be added to this list, as its use as a rust solvent is based on its ability to form soluble complexes wtih iron.

Metal complex formation, for present purposes, may be visualized as the reaction: $M + C \rightleftarrows MC$ where M is the metal or alkaline earth cation, C is the complexing agent and MC is the complex formed. The extent to which this reaction will occur is indicated by the equilibrium constant

$$K_{me} = \frac{[MC]}{[M]\,[C]}$$

where K_{me} defines the ratio of metal in the complexed or deactivated state and metal in the ionized state. When K_{me} is very large, little metal ion will be in solution as cation. K_{me} is usually referred to as the stability constant of the complex MC; being very large usually, it is expressed logarithmically.

The usefulness of a complexing agent as water softener or solubilizing agent is intimately associated with stability constants. If a solution contains Ca^{++}, complexing agent and a precipitant such as soap, phosphate, oxalate or carbonate, then the system may be described by the equilibrium: $C + MX \rightleftarrows MC + X$ is the metal precipitant and MX is the precipitate which might form. The extent to which this reaction will proceed to the left or to the right may be expressed as the equilibrium constant for the reaction

$$K_s = \frac{[MC]\,[X]}{[MK]\,[C]} = [K_{me}]\;[K_{mx}]$$

where K_{me} is the stability constant of the complex MC and K_{mx} is the solubility product of the poorly soluble compound MX. If complexing agent and precipitant are present in equivalent concentrations, then K_s is very much greater than 1.0, the complexing agent will dissolve the poorly soluble salt MX or prevent its precipitation; if K_s is much less than 1.0, the complexing agent will not dissolve the precipitate.

Stability constant data for EDTA and tetraphosphate (Quadrafos) are in the following table:

Log Stability constant

	Ca^{++}	Mg^{++}	Fe^{+++}
EDTA	10.5	8.7	26
tetraphosphate (12)	9.0	9.5	10

From such data, it may be predicted that either compound will dissolve calcium soap but that neither will dissolve magnesium hydroxide in alkaline solution (solubility product 10^{-11}).

Stability constant data now available in the literature must be treated with caution for several reasons. (1) These expressions give no hint of reaction rates. Precipitation reactions may be very slow. Colloidal or electrostatic properties of the complexing agent may have very strong retarding effects on crystal growth. (2) Usually, only one particular ionic species of the complexing agent forms stable complexes. In the case of EDTA, two complexes are possible with divalent cations—MHY′ and MY″ (where H_4Y is EDTA), but little MHY′ is ever present in solution and the stable complex is MY″. Citrate forms several complexes depending on the degree of ionization of the three carboxyls and the relative proportions of metal and citrate in solution; when the hydroxyl (pH 11) ionizes, however, in very alkaline solution, complexes of increased stability are formed. (3) The equilibria expressions tell nothing about the solubility of the complex; some complexes are soluble in water, some in oil, and some in neither. Citrate forms oil soluble complexes; EDTA forms no complexes in the absence of moisture and is useless in fats or vegetable oils. (4) A complexing agent will not necessarily combine with a metal in a single fixed ratio; although EDTA forms 1:1 complexes (one mol EDTA: one mol metal), citrate forms 1:1, 2:1 and 3:1 complexes. The oxalate-iron complex formed in rust stripping is a 3:1 complex. The nature of the polyphosphate complexes is still in question. (5) Complex formation is very sensitive to pH which obviously controls the concentration of the complexing species. (6) Complex formation is sometimes affected by temperature and also by the electrolyte content of the solution.

Applications

STRICTLY speaking, complexing agents are not detergents except in so far as they function as solubilizing agents. The solvent action of EDTA and the polyphosphates on calcium and magnesium soaps requires no prolonged comment. Not uncommonly, EDTA may be used to wash dirty floors encrusted with insoluble soap, converting this to soluble soap and thus using the very soil itself as a washing agent. Deposits of milk stone (calcium-protein-fat composition) on dairy equipment (7), beer stone (calcium oxalate) on brewery tanks, calcium carbonate scale on heat exchangers, all may be dissolved by EDTA or polyphosphates in alkaline solution. Rust stains on urinals, floors, showers, may be removed with these also, or with oxalic acid.

Complexing agents have also been used in decontamination of radioactive surfaces. Polyphosphates, citrate, EDTA, and also the related iminotriacetic acid have been reported effective (2), although they still leave the problem of how to dispose of the wash solution. EDTA at 1 per cent has been reported more effective

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than 10 per cent citrate or 6N nitric acid for removing radioactive barium from glass, just as effective as the more concentrated reagents on steel (8); rather strangely, EDTA also removes radioactive phosphorus from lucite (9).

Metal complexing agents prevent precipitation of insoluble compounds in detergent and soap formulations, improving the appearance of liquid products. Clarification of liquid soaps and shampoos with EDTA is now standard practice (13). Iron haze in liquid synthetics and the peculiar turbidity of dilute (0.5%) lauryl sulfate solutions may be controlled by EDTA.

Metal complexing agents prevent precipitation of insoluble compounds in the course of a detergent operation. As water softening agents, metal complexers are generally expected to overcome completely the limitations of soaps in hard water. It is questionable if this can be done in every case. Twenty-four per cent EDTA must be incorporated in a soap to soften the wash water of 400 ppm $CaCO_3$ completely when the soap product is to be diluted to 0.4%; even then, no provision is being made for softening the large volume of water used in the rinse. If the less efficient polyphosphate water softeners were to be used, the economics of the application might look better, but there might be a problem in getting enough soap into the package to take advantage of the situation. Fortunately for the soap and detergent industry EDTA and the polyphosphates possess synergistic properties which make the use of very large percentages unnecessary.

Alkali detergents used in dishwashing (4) or in metal cleaning also require complexing agents to prevent precipitation of poorly soluble silicates, phosphates and carbonates. Some grades of commercial silicates have been observed to develop turbidity even in distilled water in stainless steel; although the nature of the precipitate is in doubt, EDTA will prevent its formation. Sodium hydroxide bottle washing compounds have long presented a serious problem because of magnesium hydroxide precipitation in hard water. The polyphosphates and EDTA are both ineffective in this case; sodium gluconate works quite nicely (16) unless phosphate or carbonate are present. A combination of EDTA and gluconate is claimed to be satisfactory in such cases.

Metal complexing agents may also be useful in inhibting catalytic effects of trace metals. EDTA is an excellent preservative or rancidity retardant for soaps (15), its effectiveness being due to its ability to deactivate trace amounts of copper and manganese in the soap stock. Similar effects are obtained in sulfonated oils; odor development in alkyl naphthalene and alkyl benzene sulfonates is also retarded. This preservative property is advantageously utilized in rug and upholstery shampoos.

Tendering of textiles as the result of air oxidation during washing is also catalyzed by trace metals. This may possibly be an important factor in limiting the use of peroxide compounds in detergents in this country where washing temperatures are much higher than in Europe which has used such products for many years. EDTA, which slows down the release of oxygen from peroxides, may make possible the use of such products at American laundering temperatures. There is some indication that EDTA will also prevent damage of textile fibers by oxidation; its use with silicate for this purpose may be desirable (11).

It was noted earlier that metal ions catalyze hydrolysis of polyphosphates. In dilute sodium carbonate, the hydrolysis rate of 0.078 M polyphosphate at 100° C. is increased ten fold on the addition of 0.005 M Mg^{++} (10). Accelerated depolymerization has also been noted with Ca^{++} (5) and in our own laboratories with copper. Preliminary experiments have indicated that EDTA will slow down the hydrolysis of calcium polyphosphate complex buffered at pH 8-9 by as much as 35 per cent.

To complete this story, a recent paper by the author and R. Bernstein (14) might be summarized here. It has long been recognized that the polyphosphates possess valuable properties in soap and detergent solutions, not associated with metal complexing as these properties are exhibited even in distilled water. That these effects are not associated with the colloidal properties of polyphosphates is suggested by the very similar behavior of the non-colloidal ethylenediamine tetraacetic acid.

Especially puzzling is the stabilizing effect of EDTA on certain foams. Synthetic detergents are com-

(*Turn to Page* 139)

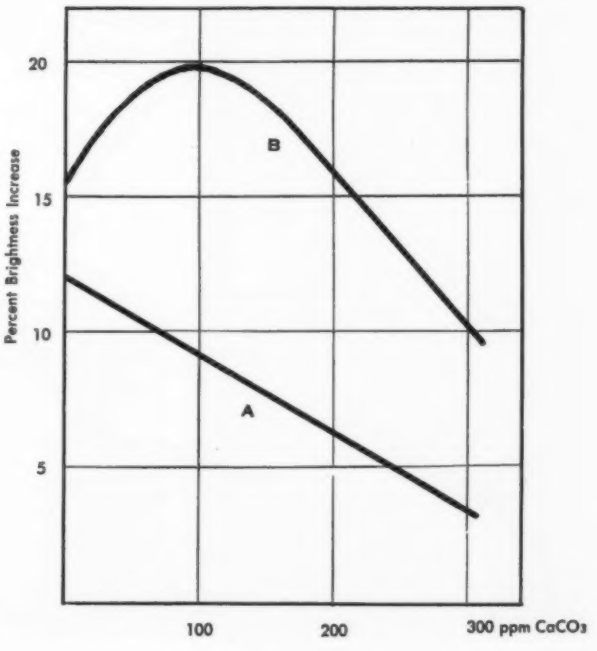
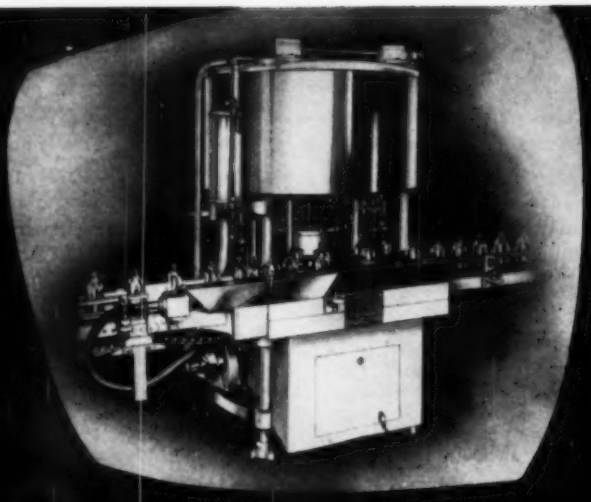


Figure 1

Detergency of 0.25% soap (A) and 0.25% soap plus 0.005% Na_4EDTA (B) at 20° C.



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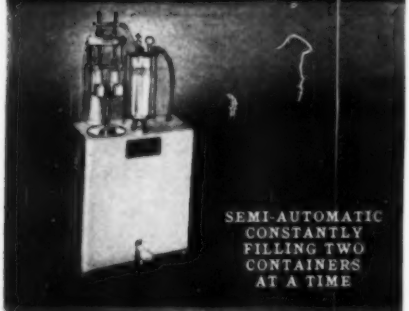

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Printers' Detergent Report

A new report on "Detergents and Solvents for the Printer" was announced recently as one of the current research projects being undertaken by the Research and Engineering Council of the Graphic Arts Industry, Washington, D. C. Information is now being compiled as to the latest available materials, products, formulas and developments in the field from over 100 industrial research laboratories and manufacturers in the U.S. The report, to be published by the Council as a revision of its 1950 report on the same subject will be divided into sections dealing with type washes, roller washes, offset blanket washes, rubber plate washes, etc., so that printers may utilize the report as a reference text in the plant.

The ideal detergent, according to the Council, would have fast and complete evaporation without leaving a residue, would have no chemical or physical reaction with the materials being cleaned, would be non-inflammable and would be non-toxic; would not cause dermatitis, and would require no special precautions for storing or handling. In addition to these requirements, it must also be economical, the Council states.

Lipac Offers New Filler

A semi-automatic bottle filler suitable for free-flowing, viscous and foaming liquids including lotions, oils, and shampoos, was introduced recently by Lipac Inc., New York. The unit can be supplied with six to 12 filling valves and is adjustable for handling of one ounce to gallon size containers of glass, tin, or plastic. All contact parts are of stainless steel, and readily demountable for cleaning. Equipment includes an eight foot adjustable guide track, vacuum pump, motor, and an automatic overflow system. A fifteen-gallon stainless steel supply tank is mounted at the rear of the filler.

How to Control Dermatitis

Control of dermatitis in industry is the subject of an illustrated 25-page booklet issued recently by West Disinfecting Co., Long Island City, N. Y. A program of preventive measures is outlined, consisting of suggestions for insuring personal cleanliness, protecting exposed skin areas, preventing clothing contamination, and guarding against special hazards.

"Lan-O-Kleen" and "Sulpho" hand cleaners are discussed in detail. West cutting oil additive and "Wescol" are considered as protection against the formation of pathogenic bacteria in cutting and cooling compounds, a common cause of industrial dermatitis. The chapter on the firm's three types of antiseptic protective creams includes a chart of chemical hazards in industry and the right cream to counteract each of them. A six-page chart covering a wide range of industries lists working conditions, types of dermatitis prevalent where these conditions exist, and suggested preventive measures for each.

New Moisture Meter

A new instrument for testing moisture in virtually any non-metallic, dry granular material, including toilet soaps and starches, was announced recently by Moisture Register Co., Alhambra, Calif. Model "G5" consists of four separate units: master measuring unit, interchangeable range box, sampling unit consisting of electrode and sample cup, and hydraulic press with pressure gage. A patented feature of moisture register "G5" is the "suppressed zero" technique which spreads the critical moisture range over the entire face of the micro-ammeter dial, giving more dial divisions for each percent of moisture content.

According to the manufacturer "G5" can be used as a production line testing instrument which does not require attendance of a skilled operator.

New instrument for measuring moisture in soaps and other dry granular material.

New Emulsol Bulletin

Emulsol Corp., Chicago, recently issued technical bulletin No. 34, which is concerned with "Emcol K-8300," a new latex emulsifier and stabilizer. It is recommended for use in controlled "cold" latex polymerization or stabilized formulations.

Fats, Waxes Tabulated

Publication of *Properties of the Principal Fats, Fatty Oils, Waxes, Fatty Acids and their Salts* by M. P. Doss, The Texas Co., New York, has just been announced. Cloth, 244 pages, 8½ x 11, price $5.00. After dealing in two short paragraphs with type classification of fatty oils and waxes, and with the significance of some fatty oil tests, the book covers characteristics of approximately 50 of the principal fats, fatty oils, and waxes. Properties of more than 800 aliphatic acids are tabulated. Data given on the salts of fatty acids range from aluminum through zirconium, approximately 1,750 salts being listed.

The author, who has been technical librarian of the Texas Co. for 26 of his 31 years' service with the firm, lists more than 1,350 literature references.

Snell Spray Drier Data

A new eight-page booklet entitled "Zizinia Packaged Unit Spray Dryers" has been issued recently by Foster D. Snell, Inc., New York. It presents in question and answer form information on performance and field of application of spray dryers. It supplies data on price and other problems arising in the installation of spray dryer units.

Plax Issues Folder

"Plaxpak" polyethylene bottles are described in an eight-page illustrated brochure issued recently by Plax Corp., West Hartford, Conn. Typical uses for the bottles, which are claimed to be squeezable, unbreakable, colorful, lightweight, and inert to chemicals, are shown. They include industrial and laboratory, medical, household, utility, and cosmetics fields. Data on closures, accessories, and printing and labeling techniques are included.

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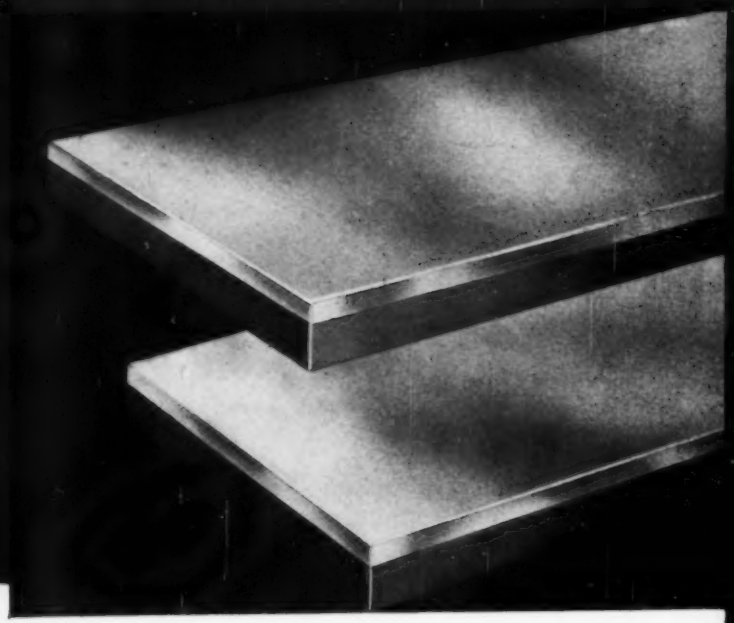

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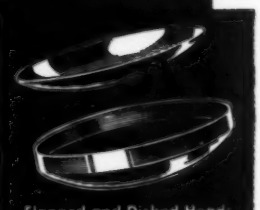

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By E. G. Thomssen, Ph.D.

Processing Heating Equipment

IN THE manufacture of sanitary chemicals, heating during processing frequently is necessary. As many manufacturers in this field are small, the generation of steam heat presents a problem. It is not feasible in many cases to install a high pressure steam boiler of even small capacity because the average specialties plant's production volume does not warrant the expenditure. The answer to the question of just how to generate heat for the making of such items as soaps, waxes and disinfectants is important and puzzling.

As a result of differing circumstances within plants in the industry, various procedures are being followed in heating operations. These include direct heat, immersion electric elements, circulating hot water or other fluid, and low or high pressure steam boilers.

Direct heat may be used very simply. Frequently 55 and 110 gallon heavy steel drums are used for direct heating. Rather than applying the heat directly from a gas, oil or coal flame or even an electric stove, it is a good practice to employ a round iron collar, about a foot wide and with a number of slots along its periphery. The collar is welded to the bottom of the drum. A gas or oil burner, coal stove, electric stove, pot furnace or other heating device may readily be used with the reinforced drum without much danger of charring its contents. It is also advisable to inspect the bottom of the drum frequently for leaks, as the application of heat speeds up corrosion of the steel plate.

Electric immersion heaters find only limited application in the sanitary chemicals field. The heavy duty type heater is the most efficient and economical. Thermostatic control and correct circulation are important for uniform heating. Many types, sizes and ratings are available to fit almost any requirement. These units are very easy to install and, while more expensive to operate than other types of heat generators, are very useful in

DR. THOMSSEN

small sanitary chemical plants that do not have heat from other sources available.

Heating various types of equipment by circulating hot water by pumps or convection is used to a limited extent in sanitary chemical plants. Other liquids may be used when higher temperatures are required. One of the chief drawbacks to hot water heating is the inability of obtaining sufficiently high temperatures. Another deficiency is its slowness in heating kettles, mixers, etc. Circulating hot water heating in most cases is expensive and unsatisfactory.

Steam is most desirable for heating processing equipment. As a result, it is used whenever feasible. Unfortunately, many smaller plants making sanitary chemicals cannot generate steam economically, mainly because their requirements are too limited to warrant the expense of a proper boiler installation. The decision of whether or not it pays to install a steam boiler in smaller plants depends upon several considerations. These include the heating of the plant area, the amount of steam required, the steam pressure and provision for future expansion.

In plants that are heated by low pressure steam, the heating boiler at times is fixed in warm weather to process certain materials. It is questionable whether this is economical because such boilers have too large a capacity for processing small batches. The amount of steam necessary to heat kettles, dryers, etc., is debatable. It is tied up rather closely with the steam pressure. Most chemical equipment is made to withstand 100 psi of steam pressure. Municipal ordinances generally require a licensed operator for steam pressures above 12-15 psi. This additional expense cannot be borne in small plants. It is well known that high pressure steam has more heat units than the low pressure. In cases where equipment designed for high pressure steam and low pressure type is used, it is necessary to increase the diameter of the steam inlets to admit a larger volume of steam in order to obtain the correct amount of heat. Small size steam generators of both the vertical and horizontal types are on the market, ranging from 10 horsepower upward. These are fully automatic and are oil or gas fired. The use of such boilers is more advisable than operating steam room heating equipment in off seasons. Small steam generators are economical to operate and in many cases can be used to replace direct firing or immersion heaters. As steam generators are self contained, their installation costs are nominal.

Where steam is required in medium size plants, the so-called package type boilers are finding popular acceptance in an increasing number of installations. Package boilers are self-contained; easily and rapidly installed; burn gas, oil or coal; steam up quickly; and operate efficiently either fully automatically or semi-automatically. The steam pressure valve may readily be set at any desired steam pressure. Their convenience of operation has resulted in installations in medium size and large plants, and as standbys in cases of breakdowns, when less steam is necessary or to heat processing equipment that requires long runs of piping.

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Auxiliary Equipment

TO CARRY on the manufacture of sanitary chemicals requires not only the large array of machinery and equipment we have considered in this and previous articles but a large amount of what may be termed auxiliary equipment. This includes such varied items as meters, scales, thermometers, hydrometers, measuring vessels, valves, traps, piping and laboratory testing apparatus. It is not practical to give such items other than passing mention even though they are of much importance in manufacturing processes. It is a good policy to use the correct item to weigh, measure and test various products. Too often batches of products have been spoiled or not run uniformly because an inaccurate scale or incorrectly graduated measure had been used. It is poor economy to skimp on items of this type. Attention should also be given to the correct layout of piping and selection of valves and traps to operate a plant smoothly. Within a day of this writing, we experienced three hours lost time in a plant because long runs of piping had been installed with the valve at the end of the run, away from the heating kettle for high boiling fats. This caused freezing in the lines, which is altogether too common an imperfection in piping hookups.

Many small plants do not give enough attention to even the simplest of testing because they do not have the right thermometer or other piece of laboratory equipment, indicator or testing papers. Such a deficiency results in spoiled batches or loss of business. Even "practical" experience should include some "scientific" methods.

It has not been possible to cover in every detail the equipment we have discussed nor is every piece of machinery we have described necessary in most sanitary chemical manufacturing plants. Our main purpose in writing this series of articles has been to recount observations based upon experiences in many of the smaller and medium sized plants of this industry. No series of articles such as this can detail specifically the necessary installations in every individual plant.

Plastic Laminated Bag

A SATISFACTORY, inexpensive, moisture-proof cotton or burlap bag is now being offered by Mente & Co., Savannah, Ga. The bag is not the usual liner type but consists of a tough sheet of polyethylene, laminated firmly to the fabric. These bags also are made with asphalt or polyvinyl resin, between paper and a textile. It is claimed they afford considerable savings in shipments of powdered products, as compared with those in drums or barrels.

Silicone Covered Wire

IN PLACES where constant light is necessary and the wire leads are subject to corrosion and weathering, the use of "Silastic Lead Wire" is proving a solution to the problem. Lower maintenance and replacement costs as well as continuous, trouble-free operation soon pay for the installation expense. Further information may be had from Dow-Corning Corp., Midland, Mich.

Label Paste

IT IS VERY annoying to apply a label to such non-porous materials as glass, tin or other metals only to have it come loose in time. Paisley Products Co., New York (19), N. Y. makes a grip-tight label paste to overcome these conditions. This company claims their product holds labels on smoothly and firmly when applied to practically all surfaces. Special resins are used in the composition of the paste.

Inclining Belt Conveyor

THE Inclinebelt Bulletin issued recently by Standard Conveyor Co., St. Paul (9), Minn., describes the use of this device to lift and move sacks, cases, cartons, bundles and similar packages from floor to floor. Motor driven, the conveyor handles up to 20 pounds of live load per foot, has a lifting range of from eight to 14½ feet and the widest belt is 25½ inches. This company also makes other types of conveyors.

Variable Speed Drive

THE Reeves Vari-Speed Jr. will convert any standard constant speed motor to one of variable speeds. It may be installed on the motor shafts of ½ to 1½ H.P. motors. The speed variation is controlled by a handwheel which slides the motor backward or forward for speed variations. Any standard V belt or shive may be used. It is made by Reeves Pulley Co., Columbus, Ind.

Corrosion Proof Lining

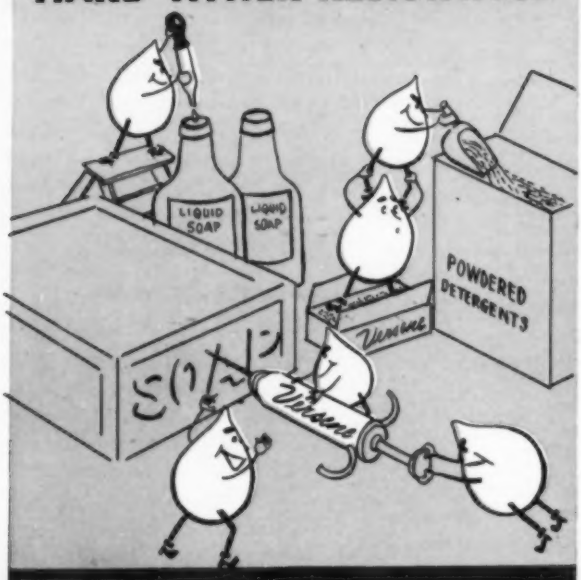
A COMPOUND of inert resins and plasticizers is now available as a flexible, thermoplastic sheet to protect storage tanks, iron, wood or concrete, or other equipment from corrosive substances. Among other equipment besides tanks on which it is being used, are tank cars, tank trucks, piping, sluiceways and sewers. It is resistant to acids, alkalis, alcohol, fats and oils, salts and hydrocarbon oils. This has been demonstrated thoroughly by its increasing production for over ten years. The sheeting comes in two different types. It may be applied locally in many cities. A special leak-proof, locking device to facilitate application to concrete tanks, as they are poured, is molded to sheets for this application. Amercoat Corp., South Gate, Calif., manufactures this lining.

Paper Foil Drums

LIGHT-WEIGHT drums, constructed from aluminum foil and kraft liner-board, are being used successfully for packaging vegetable oils, petroleum products, grease, as well as granular, powdered and semi-liquid products. Severe, controlled tests under elevated temperatures and external pressures on 5 gallon and 15 gallon drums over 30-day periods resulted in no leakage or other failures. An internal pressure of 46 psi showed no pressure loss in 24 hours. During shipment leakage was less than from steel drums. The drums are made quite easily. Coils of foil and laminates of kraft board are coated with a special adhesive and wound together to the desired thickness to assure proper strength. Then this shell is attached

(*Turn to Page* 139)

HOW TO "BUILD IN" HARD WATER RESISTANCE



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Products and PROCESSES

Solid Detergent

Because of hygroscopicity and other factors it is desirable to have trisodium phosphate in the form of a solid for industrial and domestic applications. The salt is fused in its own water of crystallization, and some of the water is removed. At the proper temperature the molten mass is cast in molds; this avoids the formation of large crystals of solidification. To the molten salt may be added active or inert substances, abrasives, coloring agents, or perfumes. Spanish patent 194,253, 1951. Through *Chem. Ab.*, vol. 46, No. 19.

Guanidine Soaps

Guanidine soaps are prepared by reaction of a fatty acid in alcohol with guanidine carbonate. The aqueous soap solutions are strongly alkaline, and with C_4 to C_{12} acids are stable. The solutions can be adjusted to pH 7.2 without change in fluidity. The soaps form liquid molecular complexes with many water-insoluble compounds and appear to be better solubilizers than alkali soaps. E. Neuzil and P. Talpin, *Bullet. soc. pharm. Bordeaux*, 90, 123-30 (1952), through *Chem. Ab.*, vol. 46, No. 19.

Polyoses in Detergents

To the usual detergents and cleaning and washing agents, oxidation products of high-molecular polyoses are added, having at least 15, preferably 40-60 COOH groups per 100 monose units. Examples are cellulose, starch, dextrin, oxidized with nitrogen peroxide gas or a mixture of liquid nitrogen peroxide and nitric acid. The results surpass even those obtained with sodium carboxymethylcellulose, both in their capacity of removing dirt and suspending dirt. One such formula for a soaking compound contains 50 kilos sodium carbonate, ten kilos water glass, one kilo oxidized cellulose (45 COOH groups), and 30 kilos water; a mixture for washing machines contains 11 percent soap, 40 percent sodium carbonate, 3 percent sodium silicate, 1.1 percent oxidized cellulose (45 COOH groups), and 44.9 percent water. Dutch patent 69,883, 1952, through *Chem. Ab.*, vol. 46, No. 19.

New Film Cleaner

Electro Chemical Products Co., East Orange, N. J., has placed on the market a new specialized chemical compound for cleaning and conditioning motion picture film. Known as "ECCO No. 1500," the product is described as a water-white, nonabrasive solvent compound of an aliphatic hydrocarbon and a fire-retarding chlorine hydrocarbon with antistatic and film conditioning agents of inert organic materials. Among advantages claimed is the complete elimination of hazards associated with widely used carbon tetrachloride film cleaners. The new compound, with an automatic applicator, was displayed and demonstrated at the recent Chicago convention and trade show of the National Audio-Visual Association.

New Laundry Finish

Commercial availability of "CMC Formula", a new laundering and finishing agent for use in power laundries, was announced recently by Hercules Powder Co., Wilmington, Del. The product is said to be dry, granular, and fast dissolving, therefore easy to use. According to the manufacturer it imparts a high quality finish while being economical in use, and may be used as a size by itself. "CMC Formula" is available through Carman & Co., Brooklyn.

Palm Oil from Waste

In palm oil extraction there is a residue of 25 to 75 percent (by volume as well as weight) of the original raw material treated. This residue contains about 15 percent oil and is treated with water and alkali in an open vessel at 105°; the remaining grease being saponified. After standing, the foreign materials will settle, and the floating soap is separated and solidified in molds. The soap may be changed to the fatty acids of palm oil by treatment with hydrogen chloride or sulfuric acid. Spanish patent 196,303, 1951, through Chem. Ab., vol. 46, No. 19.

Japanese Detergent

A detergent is made by treating an aqueous extract of saponin with calcium hydroxide to form a calcium salt of saponin. Japanese patent 2390, 1950. Through *Chem Ab.*, vol. 46, No. 19.

Wash-Active Surface

Distribution of wash-active molecules on fiber surfaces is the subject of an article by H. Stuepel in *Melliand Textilber.* 32, 941-2 (1951). For wash-active processes, the surface which can be covered and is covered by colloidal electrolytes is of importance. This surface has been calculated and called the "outer surface". The total surface of fibers is called "inner surface". An attempt is made to calculate from practical laundry of white goods the so-called "active" surface from the concentration, molecular weight, liquor ratio, and mol. extension with various covering layers. The values lie between the "inner" and "outer" surface, if unimolecular covering is assumed, and the values are 10^4—10^5 sq.cm/g. cotton, through *Chem. Abstracts*, vol. 46, No. 10, p. 4803.

New Chlorophyll Plant

Construction of a $1,000,000 plant for the continuous extraction of chlorophyll was begun recently by National Chlorophyll & Chemical Co., at Lamar, Colo. According to J. C. Hearn, president of National Chlorophyll and National Alfalfa Dehydrating & Milling Co., New York, the new plant will have an annual production capacity of over 100,000 pounds. In 1951 the entire production of chlorophyll in the U. S. amounted to approximately 60,000 pounds, and 1952 production is estimated at about 95,000 pounds. The new plant is scheduled to be in operation by April 1953.

Hooker Chemical Guide
(ONE OF A SERIES)
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resorcinol
naphthol
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indigo
sodium salts
pigments
aniline dyes
ceramics
pharmaceuticals
cosmetics
viscose rayon
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New Chicago Office—To better serve Midwestern chemical users, Hooker has recently opened an office at 1 North LaSalle Street in the heart of Chicago's Loop. Midwestern users need only call Chicago, CEntral 6-1311, to receive fast shipment from the main plant at Niagara Falls. Hooker technical personnel will also be stationed at the Chicago office to assist you with your chemical requirements.

New plant at Montague, Michigan—In addition to the existing plants at Niagara Falls and Tacoma, Hooker is building a plant at Montague, Michigan which will increase chlorine and caustic soda production by 100,000 tons per year. Construction will be completed in 1953. This plant will further speed deliveries to Midwestern users.

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NEW Patents

The information below is furnished by patent law offices of

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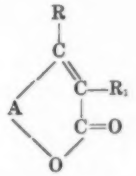
The data listed below is only a brief review of recently issued pertinent patents obtained by various U. S. Patent Office registered attorneys for manufacturers and/or inventors. Complete copies may be obtained direct from Lancaster, Allwine & Rommel by sending 50c for each copy desired. $1.00 for Canada. They will be pleased to give you free preliminary patent advice.

No. 2,611,747. Glass Cleaning Composition, patented by Herbert E. Heideman, St. Paul, Minn., assignor to Lan-O-Sheen, Inc., St. Paul, Minn., a corporation of Minnesota. A glass cleaner is patented containing as essential ingredients an aqueous solution of lower alkyl aliphatic alcohol and naphthalene, the naphthalene being present in an amount sufficient to produce a noticeable cleaning effect, but not exceeding .03 per cent by weight.

No. 2,611,729. Insecticidal Compositions Containing Hydrocarbon Esters of Diethyl Dithiophosphoric Acid, patented by Jeffrey H. Bartlett, Westfield, Harry W. Rudel, Roselle Park, and Elmer B. Cyphers, Cranford, N. J., assignors to Standard Oil Development Company, a corporation of Delaware. The patent covers an insecticidal dust composition comprising the styrene ester of diethyl dithiophosphoric acid admixed with a powdered clay.

No. 2,610,213. Manufacture of DDT, patented by Norman E. Searle, Wilmington, Del., assignor to E. I. du Pont de Nemours & Company, Wilmington, Del., a corporation of Delaware. In the manufacture of DDT, the patent describes the steps comprising condensing chloral and mono-chlorobenzene while a liquid mixture of the chloral and mono-chlorobenzene in the proportions of at least 2.2 moles of mono-chlorobenzene for each mole of chloral is emulsified in a sufficient amount of sulfuric acid of about 95 per cent and not more than 98 per cent strength to emulsify all of the mixture, effecting cooling as required to maintain the temperature from about 10° C. to about 40° C., adding oleum as required to maintain the sulfuric acid at this strength, and adding mono-chlorobenzene as required to prevent separation of the solid phase.

No. 2,610,152. Detergent Compositions Containing Amino-Coumarins, patented by Franz Ackermann, Binningen, Switzerland, assignor to Ciba Limited, a Swiss firm. A detergent composition is covered, consisting essentially of a water-soluble, synthetic, organic, anion-active detergent selected from the group consisting of water-soluble soaps and synthetic, organic, non-soap, anion-active, sulfonated detergents, containing 0.1 to 5 per cent by weight of an amino coumarin corresponding as free base to the formula



wherein A is a radical of the benzene series in which two vicinal carbon atoms are members of the unsaturated lactone ring and R and R_1 are members selected from the group consisting of hydrogen and lower alkyl, the radical A containing a member selected from the group consisting of secondary amino groups and tertiary amino groups.

No. 2,610,142. Distillation of Fatty Acids, patented by Edward A. Lawrence, New York, N. Y., assignor to Colgate-Palmolive-Peet Company, Jersey City, N. J., a corporation of Delaware. The patent describes a process of treating a vapor stream of fatty material carrying entrained liquid particles to purify said vapor comprising moving the vapor under reduced pressure at a velocity substantially equal to the acoustic value, and after said vapor is moving at acoustic velocity subjecting the same to a centrifugal purifying action while maintaining said vapor under reduced pressure to cause said entrained liquid particles to separate from the vapor stream.

No. 2,611,728. Insecticidal Compositions Containing Substituted Aliphatic Esters of Diethyl Dithiophosphoric Acid, patented by Jeffrey H. Bartlett, Westfield, Harry W. Rudel, Roselle Park, and Elmer B. Cyphers, Cranford, N. J., assignors to Standard Oil Development Company, a corporation of Delaware. The patent covers an insecticidal dust composition comprising a substituted aliphatic ester of diethyl dithiophosphoric acid selected from the group consisting of the cyanoethyl and chloroethyl esters admixed with a powdered clay.

No. 2,610,116. Herbicide and Defoliant, patented by Lyle D. Goodhue and Carolyn E. Tissol, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware. A method of inhibiting the growth of undesired plants is described which comprises contacting same with enough of a 2,3,4,5-bis(Δ^2-butenylene) -tetrahydrofurfural to inhibit growth.

No. 2,609,402. Olefin-DDT Reaction Products, patented by Elbert C. Ladd, Passaic, N. J., assignor to United States Rubber Company, New York, N. Y., a corporation of New Jersey. The patent covers the process which comprises heating a mixture of 1,1,1-trichloro-2,2-bis(p-chlorophenyl) ethane and a 1-alkene in the presence of a free radical reaction initiator, and recovering an adduct having the formula

$$(p\text{—}Cl\text{—}C_6H_4)_2\text{—}CH\text{—}CCl_2\text{-}[\text{-}CH_2CRR'\text{-}]_n\text{-}Cl$$

where n is an integer of from 1 to 3 and R and R′ are selected from the group consisting of hydrogen and alkyl, from the reaction mixture. A new chemical having the formula

$$(p\text{—}Cl\text{—}C_6H_4)_2CH\text{—}CCl_2\text{-}[\text{-}CH_2\text{—}CRR'\text{-}]_n\text{-}Cl$$

where n is an integer of from 1 to 3 and R and R′ are selected from the group consisting of hydrogen and alkyl.

Hooker Rotation System

As part of its management development program, Hooker Electrochemical Co., Niagara Falls, N. Y., recently announced the following temporary appointments: Joseph A. Tardiff and John D. Sweeney as area supervisors, George A. Duckwall as acting department head, and Alton V. Thorpe as personnel supervisor in the industrial relations department.

These appointments are the first steps in an over-all plan for developing reserve management potential to provide for the company's growth and expansion. After having broadened their experience through temporary service in these posts, the men return to their former jobs, in which other young men were similarly trained. The plan is expected to provide not only preparation for future management positions but also to enable the trainees to perform their own particular jobs more effectively.

They discovered

Those ancient salesmen, the Phoenicians, were the first to discover soap was good business. They took the Egyptians' mixture of natural soda and animal or vegetable fats and sold it to the Gauls. The Gauls – not as smart – dallied until One A. D. before building a lucrative Roman market.

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Tar and asphalt, for example, are effectively defoamed during processing as well as during application by concentrations of Antifoam A as low as 4 parts in 10 million.

Ten ounces of Antifoam A added to a 40,000 gallon batch of crystallizing sodium bromide prevented foaming in that batch and in the next 21 batches as well. Here the effective concentration works out to about 1 part in 10 million.

If cost, contamination, or full use of process equipment are prime considerations in your operations, try Antifoam A. Practically odorless, tasteless and non-toxic, Antifoam A is safe, fast and by far the most economical and versatile defoaming agent on the market.

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SOAP PLANT *Observer*

By John W. McCutcheon

ONCE in a while an idea comes up which seems to have great potential application in the soap business. Such is the recent development of a heavy duty dispersion machine covered by U. S. Patents to be issued Dec. 2, and called the "Filmill." It is made by Micro Processing Equipment, Inc. of 254 North Laurel Ave., Des Plaines, Ill.

There are really three principal parts to the unit which is shown in the attached cut. On the extreme left is the enclosed drive for a low pitch auger. Next is the hopper for the feed material and then the auger itself which leads into a heavy duty gear pump located at the center of the cut.

The feed mechanism is operated by a 5 H.P. motor. The gear pump is a modified Worthington type with herringbone gears and heavy journal bearings. It operates at about 15 R.P.M. through a gear reduction unit which is sheave driven by a 15 H.P. motor. The variable speed control is seen at the front center just below the gear pump. Pressures of up to 2000 psi are developed and a weight type relief valve for safety is located between pump and dispersion device or mill. The grinding unit, with belt drive, is shown at the left. It is operated through a 25 H.P. motor at variable speeds depending on the type of material being processed.

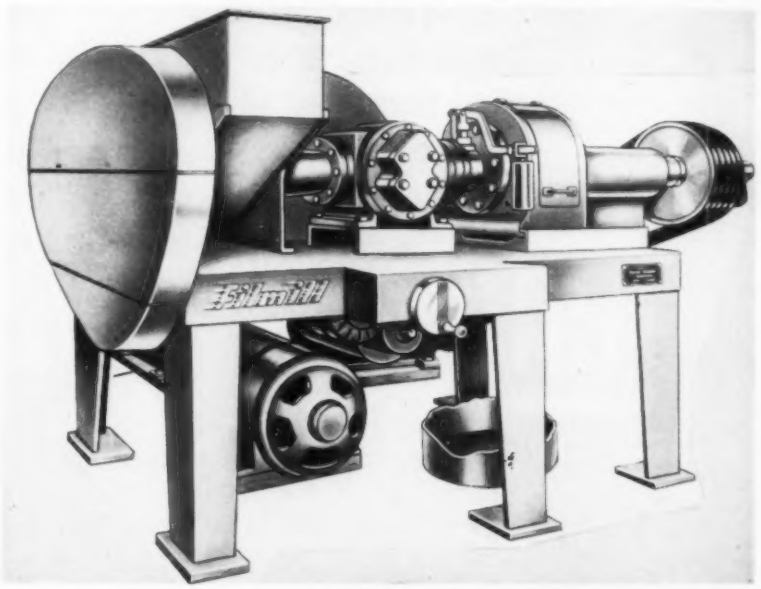
A 3-inch diameter plug of material such as 8 percent moisture cold soap is forced into the mill under high pressure. A solid cone then directs the flow along an ever narrowing annular ring until finally the material flows from the annular orifice in a thin sheet, which accounts for the name of the mill. A rotating V-shaped ring with serrated teeth along one edge is placed in the path of this extruded sheet so that the latter is split into two halves and thrown from the periphery of the rotor as a fine granule. A metal hood directs the flow

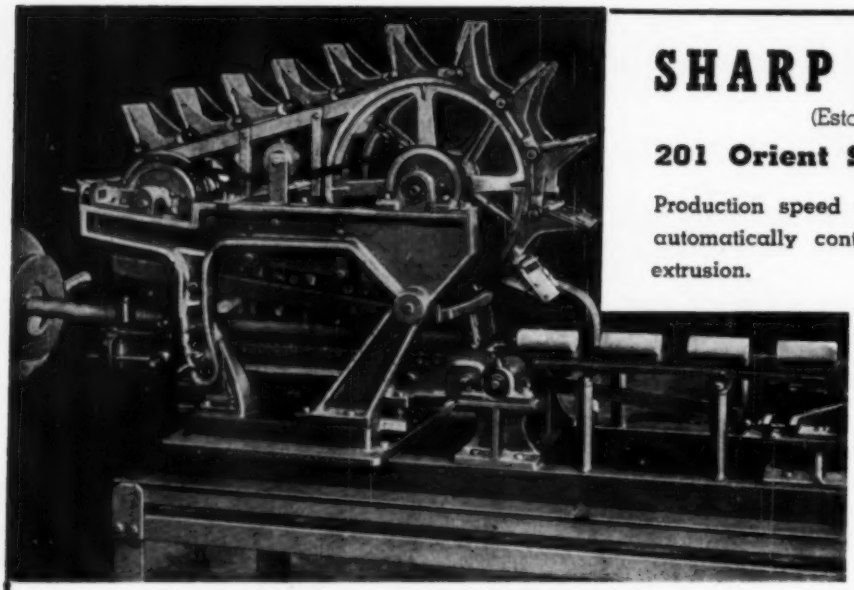
of material into a product hopper for further processing. The serrated ring has fins cut in its interior so that water or other liquid may be circulated through it for cooling purposes. It is also adjustable in such manner that the clearance between rotor and mill body or stator may be controlled within one one-thousandths of an inch. The clearance is determined by the type of material being handled and the desired degree of milling. For a pure toilet soap, the clearance would be approximately .008 inch and the speed of rotation slow such as 250 linear feet per second.

Pilot plant and development work over the past several years indicate several interesting applications in the soap field. This work has been done for the most part on a 500 pound per hour unit as described above. The smallest commercial unit that is being contemplated will have a 1000-pound per hour capacity and present plans call for delivery of such units in January, 1953. These will be made available to industry under a monthly lease agreement on a royalty basis of approximately ¼ cent per pound of product processed. This would be approximately $400-$500 per month per unit, based on an eight hour operating day.

The most important application is the incorporation of synthetic detergents in bar soaps. Another soap application appears to be the ability to make a dust free soap granule of high density without the use of such expensive equipment as a spray drying tower. The manufacturer claims that any dry mix such as soap, dry builders, perfume, or synthetic detergents that has sufficient water or other liquid present to cause dough formation, is satisfactory for processing to a granulated powder. The material is given

New "Filmill" dispersion machine announced recently by Micro Processing Equipment, Inc., Des Plaines, Ill.





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(Established 1914)

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Production speed of this continuous cutter is automatically controlled by the rate of the extrusion.

All cuts are clean and accurate.

Eliminates all scrap.

Easily adjusted to cut any size bar up to 5 lbs.

Will operate efficiently with any plastic material.

Adjustable — Continuous

SOAP CUTTERS*

Operated by Extruded Bar

Send for descriptive literature.

* Patent Pending

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Swelling test above shows, from left to right: standard toilet soap milled on new unit; standard and salt synthetic detergent processed on "Filmill" and standard toilet soap.

a rough pre-mix and then passed through the unit to produce substances having densities of 0.4 or higher. With pure soap products, low densities of 0.35 are claimed. The light density is obtained by trapping the air in the original blender so that the dough-like particles emerge as a fine spongy material. The beads are not puffed in the usual sense of a spray dried product. After screening, the larger sizes are ground and re-screened. The fines and dust which constitute less than 5% of the whole (according to the manufacturer) are returned for re-milling.

Perhaps the best conception of the equipment potentialities in the soap field can be obtained by studying the manufacturer's data on pure soaps. For example, standard toilet bar milling requires careful control of the moisture content to about 12 to 14 percent so that the mills and plodders will operate under the most efficient conditions. By use of the "Filmill" unit, moisture is unimportant with the result that close dryer control is not essential. In fact, the claim is made that the resulting soap has crystal to crystal contact structure which makes it possible to incorporate more soluble soaps and reduces swelling. These results are shown in the accompanying photos.

The bar soaps are touched simultaneously to the surface of water of 150 ppm hardness. The volume of ppt. coming down is an indication of the solubility of the bars.

In the picture above the "Filmilled" bar on the left shows much less swelling in water than that of a conventional bar. The center bar is "Filmilled" with 15% synthetic detergent and contains 9% sodium sulfate salts. The "Filmilled" powdered soap was measured volumentrically into the die chamber of a compacting press for final bar formation. This powder compacting technique or plodding is adaptable to a "Filmilled" granule. "Filmilling" also permits the use of high salt content soap, synthetic blends and a potash soap base and the incorporation of synthetic detergent active-ingredient over-soluble components within wide limits. Certainly many further questions will arise in the reader's mind in regard to this novel process. All of these, very possibly can be answered now by the manufacturer. Contracts have been made with soap companies having national distribution.

Solubility test below shows superiority of "filmilled" bar left and standard conventionally made bar right.

Water Treatment Bulletin

Troubles caused by utilization of hard water and the multiple economies effected by curing them are discussed in a comprehensive 16-page illustrated bulletin (No. 2386) recently issued by Permutit Co., New York. The brochure lists several industries in which steam and water are of importance. It explains the three basic types of ion-exchange equipment, and shows how "Zeolite" water softening units can be profitably utilized.

New Whiteness Meter

A new large-area color and color difference meter has recently been completed by Gardner Laboratory, Bethesda, Md., especially designed for the satisfactory measurement of the color of non-uniformly soiled laundry samples, where a large exposure area is essential. The new design is based on the Gardner Laboratory's color and color difference meter, the major change being in the size of the sample exposure head, which allows a 9″x12″ exposure area.

The new colorimeter can measure color changes from clean fabric to soiled to laundered, thus showing the effectiveness of the detergent under test. It is also equipped with special filters for elimination of any ultra-violet radiation from the tungsten light source for the purpose of measuring the detergent properties without including the effects of the fluorescent dyes. A special ultra-violet source is incorporated in the unit which can be used to accentuate the effects of fluorescent dyes, and a special measuring circuit for reading blue reflectance.

Metal Cleaners

(*From Page 49*)

Special Cleaners

OF COURSE, many special metal cleaners have been described in the technical and especially the patent literature. A number of these products are designed to remain in contact with the surface for an extended period of time to permit the active agent to react with the more resistant contaminants or films. In one case, (93) a composition for removing oxide, tarnish or scale from metals is made by mixing bentonite, glucono delta-lactone and a wetting agent with tripoli and infusorial earth. In a more recent procedure, (94) a silica gel is prepared from sodium silicate and hydrochloric acid; phosphoric acid, copper sulfate and glycerine being added to the gelatinous mass. This is applied to the surface; keeping the acid in intimate contact with the metal until the scale or other foreign material is loosened and can be wiped away. In another method, (95) carboxymethyl cellulose is used as the gel-forming carrier for the rust-removing acid, which may be phosphoric, citric or trichloracetic acid.

Quite interesting is a highly specialized type of cleaner formulated to remove finger prints from metal surfaces. (96) Prepared from spindle oil, sodium naphthasulfonate, sulfated fish oil diacetone alcohol and water, such a product can result in considerable savings in a metal fabricating plant. As was brought out by Binstadt, (97) rusty fingerprints prove quite costly when they make it necessary to regrind or recut precision-finished parts.

References

42) Anon.: "A Review of Product Finishing with Organic Coatings," Cleveland, Ferro Enamel Corp., pp. 8-12
43) Hazel, F. & Stericker, W.: *Monthly Rev. Am. Electroplaters' Soc.* 33:373, 1946
44) Bavister, H. S. & Vauxhall Motors, Ltd.: Brit. Pat. 547,592, 1942
45) Webster, H. G. & Falter, C. L.: U. S. Pat. 2,458,661, 1949
46) Burkhardt, T. E.: U. S. Pat. 2,428,141, 1947
47) Webster, H. G.: U. S. Pat. 2,547,-510, 1951
48) Orozco, G. H.: U. S. Pat. 2,437,-474, 1948
49) Smialowski, M., Foryst, J. & Madejski, A.: Prace Glow Inst. Met. 3:55, 1951 (through) *Chem. Abstr.* 45:9449, 1951
50) Halls, E. S.: *Metal Treat.* 6:131, 1940
51) Walter, G. W.: in "Metal Finishing Guidebook - Directory," Ed. 18, New York, Finishing Publications, 1949, p. 173
52) Eagle, E.: *Metal Finishing* 42:80, 1944
53) Anon.: *Chem. & Eng. News* 29: 1046, 1951
54) Klabunde, W.: U. S. Pat. 2,422,-556, 1947
55) Larchar, A. W.: U. S. Pats. 2,517,893-4-5, 1950
56) Pings, W. B.: U. S. Pat. 2,317,112, 1943
57) Anon.: "Nonisols", Providence, Alrose Chemical Co., 1952, 4 pp.
58) Anon.: "Aerosol Wetting Agents," New York, American Cyanamid Co., 1946, pp. 65-6
59) Sarkissian, V. B.: *Mod. Metal Finishing* 7:3, Oct. 1949
60) Turner, E. W.: in "Guidebook and Directory for the Metal Finishing Industries," New York, Metal Industry Publ. Co., 1947, p. 49
61) Anon.: "Metal Degreasing with Chlorinated Solvents," Wilmington, E. I. du Pont de Nemours & Co., 1948, 10 pp.
62) Anon.: "Vapor Degreasing Questions and Answers Handbook," Chicago, Phillips Manuf. Co., 1951, 21 pp.
63) Gray, A. G.: *Prod. Finishing* 11:76, Nov. 1946
64) Meyer, W. R.: in "Organic Finishing Guidebook - Directory," New York, Finishing Publications, 1949, p. 10.
65) Lowe, C. W.: U. S. Pat. 2,371,113, 1945
66) Bernstein, R.: U. S. Pat. 2,485,-554, 1949
67) Borus, B.: U. S. Pat. 2,466,632, 1949
68) Borus, B. & Martin, G. A.: U. S. Pat. 2,509,197, 1950
69) Secrist, J. H. & Petering, W. H.: U. S. Pat. 2,576,419, 1951
70) Smith, C. W.: U. S. Pat. 2,587,-777, 1952
71) Schmerling, G.: *J. Electrodepositors' Tech. Soc.* 26: No. 12, 8 pp. 1950
72) Anon.: "Emulsions and Detergents," Ed. 8, New York, Carbide & Carbon Chem. Corp., 1949, pp. 24-5
73) Reich, I. & Snell, F. D.: *Ind. & Eng. Chem.* 40:1233, 1948; 40: 2333, 1948
74) Reich, I. & Snell, F. D.: *Soap & Sanit. Chem.* 25:43, Feb. 1949; 25:45, March, 1949
75) Gregg, G. W.: U. S. Pat. 2,386,-789, 1945
76) Campbell, C. A.: U. S. Pat. 2,399,205, 1946
77) Tuttle, C. D.: U. S. Pat. 2,561,158, 1951
78) Barbian, H. A.: *Am. Paint J.* 36:31, May 5, 1952
79) Imhoff, W. H.: *Wire & Wire Prod.* 21:447, 520, 598 & 673, 1946
80) Hill, W. H.: U. S. Pat. 2,425,320, 1947
81) Robinson, H. A.: U. S. Pat. 2,450,861, 1948
82) Rucker, J. T.: U. S. Pat. 2,459,-119, 1949
83) Johnson, A. D.: U. S. Pat. 2,383,-800, 1945
84) Coleman, T. J.: U. S. Pat. 2,326,-837, 1943
85) Rogner, H.: Ger. Pat. 805,341, 1951
86) Pabst, A. C. & Salmon, E. S.: U. S. Pats. 2,524,825 and 2,525,-078, 1950
87) Given, C. P.: U. S. Pat. 2,413,495, 1946
88) Douty, A. & Heller, F.: U. S. Pat. 2,396,776, 1946
89) Nagel, A.: Swiss Pat. 269,804, 1950
90) Thornbury, S. G.: U. S. Pat. 2,408,155, 1946
91) Verner, H. G. & Wood, L. S.: U. S. Pat. 2,515,934, 1950
92) Holman, E. R. & Mathes, J. L.: U. S. Pat. 2,585,127, 1952
93) McDonald, L.: U. S. Pat. 2,362,-284, 1944
94) Burke, J. P.: U. S. Pat. 2,554,358, 1951
95) Beghen, A. J., Hamberg, P. F., Jr. & Smith, H. E.: U. S. Pat. 2,558,167, 1951
96) David, W.: U. S. Pat. 2,517,636, 1950
97) Binstadt, E. C.: Paper presented at the Industrial Health Conf., Cincinnati, April 22, 1952

Fleet Cleaning

(*From Page 45*)

$100, or slightly less, in a week. Wages paid for the same period of time come to around $300.

The public, which may complain occasionally of a dirty bus or an untidy taxi, probably has little actual conception of the gigantic task it is to keep these public vehicles as clean as possible for each day's operation. Wages and cost of materials for cleaning purposes make up a considerable part of bus and taxi companies operating expenses.

A close check is kept on new methods and equipment, as well as of new types of cleaning materials available. When synthetic detergents, with their ability to remain stable in hard water, were put on the market in various types of powders, flakes and liquids, these progressive transportation people were among the first to adopt them.

—— • ——

Harry A. Edson Dies

Harry A. Edson, a former district sales manager for Procter & Gamble Co., Cincinnati, died September 10 in Vassar Hospital, Poughkeepsie, N. Y.

Sanitary Chemicals Section

C. S. M. A. Proceedings . . .

Official proceedings of the 38th annual mid-year meeting of the Chemical Specialties Manufacturers Association, just off the press, are now available to non-members of the Association at $7.50 per copy, printed and plastic bound, 8½ x 11.

The latest CSMA official proceedings carry 65 scientific papers and reports presented at the June 9-10 meeting in Boston covering disinfectants, sanitizers, aerosols, insecticides, floor waxes, soap and detergent specialties, automotive products, etc.

Orders for copies of the new official proceedings should be sent directly to the CSMA office accompanied by check for $7.50. Copies to be shipped outside of U.S.A. or Canada, add 50c additional for postage. For further information write to

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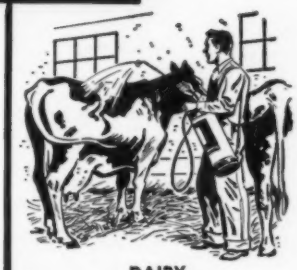

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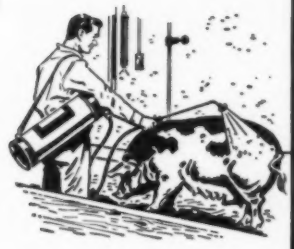

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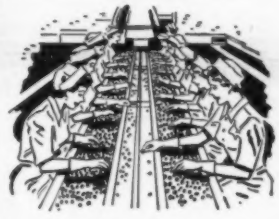

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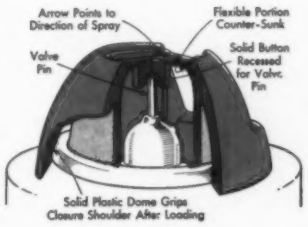
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Color: Straw yellow to amber

Assay: 75.0%-77.0%
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Specific Gravity: @ 15.5/15.5° C.—1.085-1.105

Moisture: 0.50% maximum

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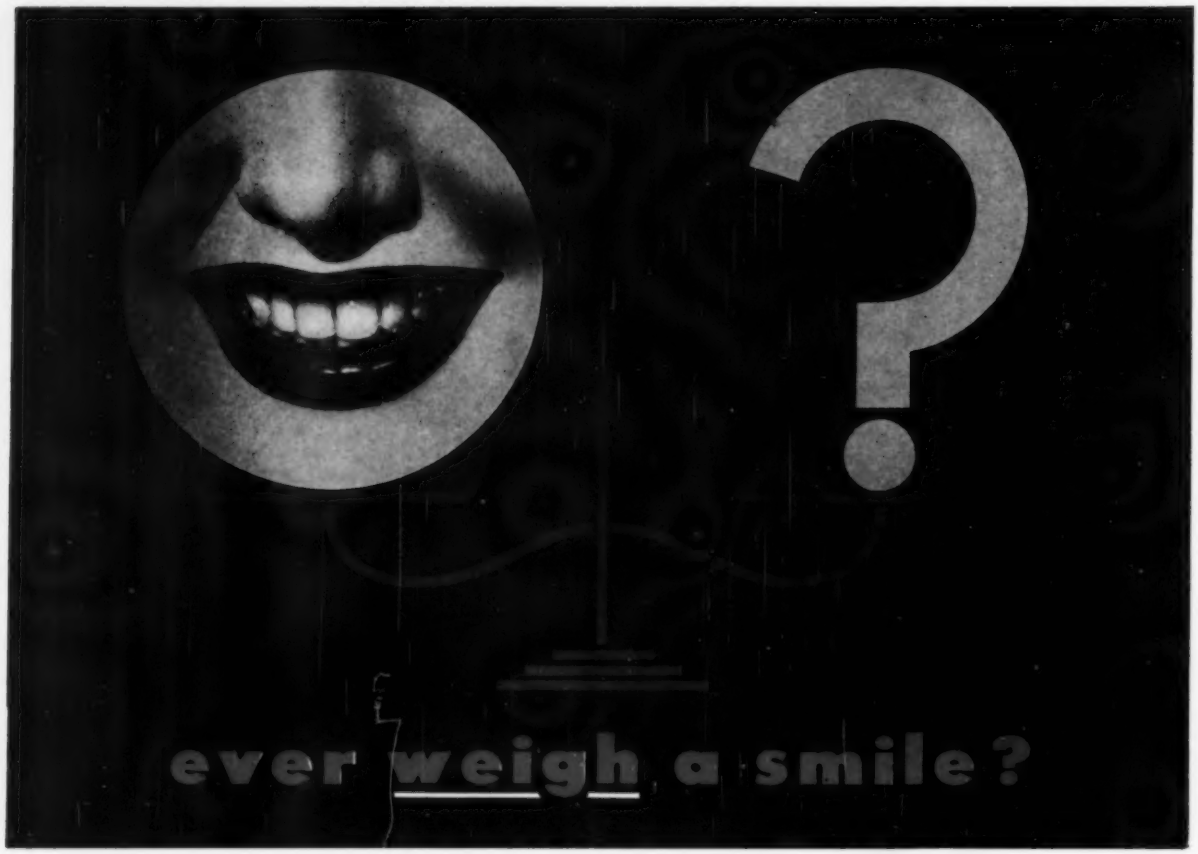

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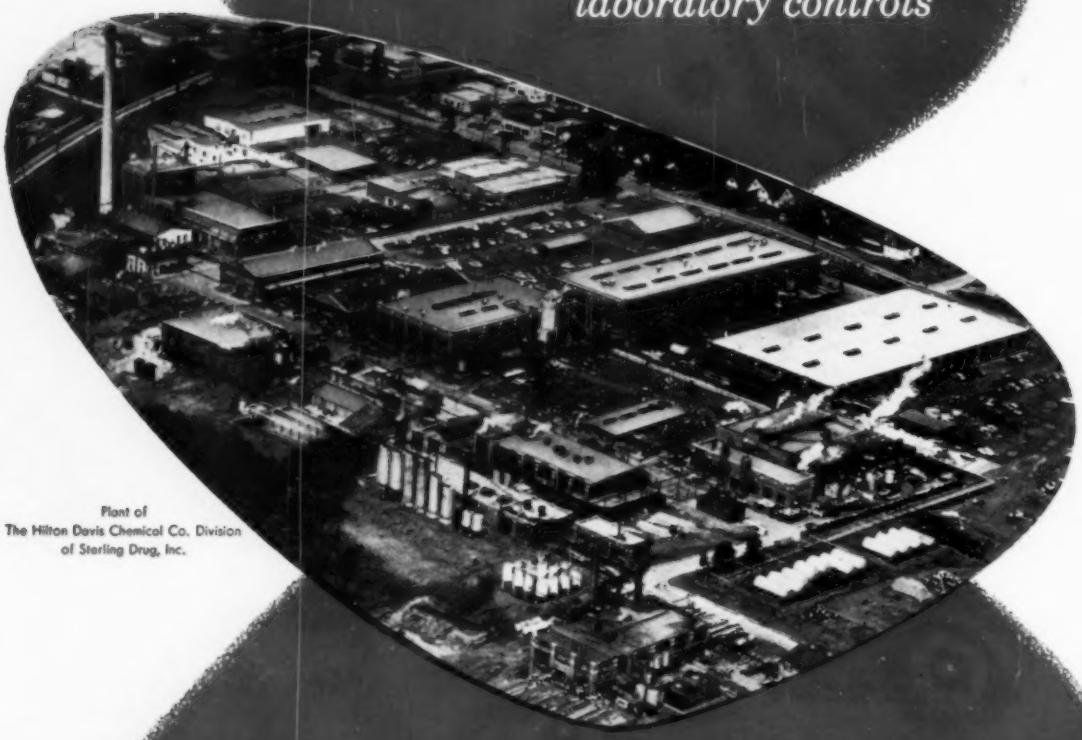

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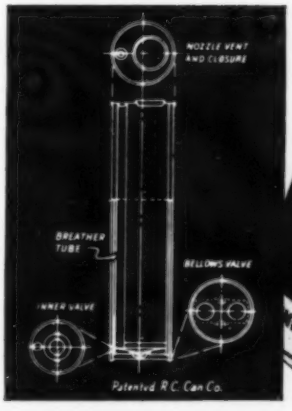

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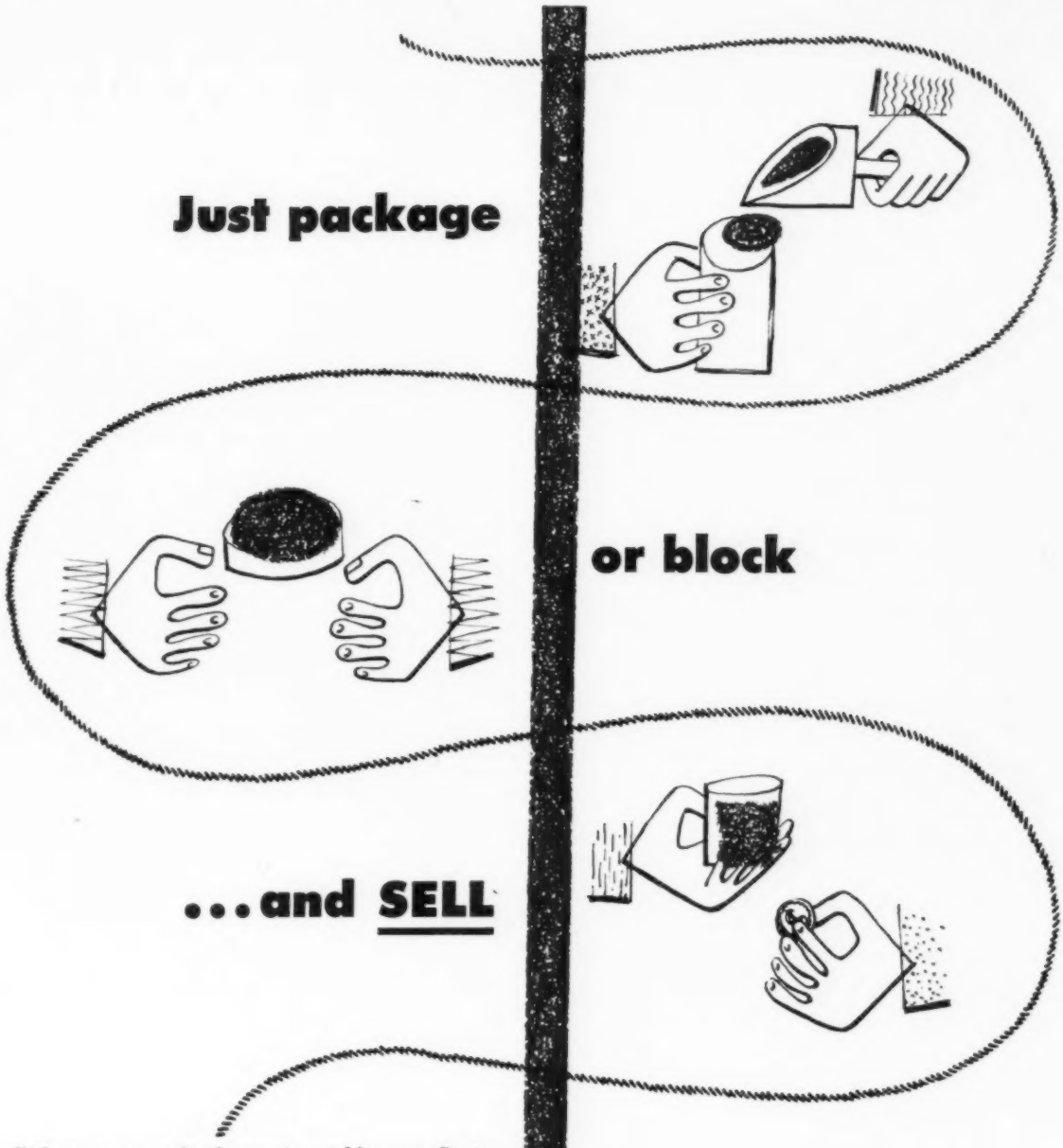

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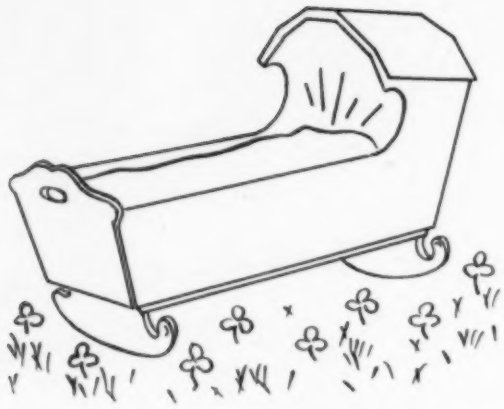

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Lindane Converters for Insect Control

By George S. Hensill* and Stanley J. Leland, M.D.**

MODERN requirements for insect control call for equipment and methods that are efficient, rapid acting, and able to meet changes of insect environment and other factors. The insecticide industry has kept up with the development of insecticides which have made possible control of these constantly changing conditions and factors of insect life history and resistance. In keeping with insecticide development, excellent progress has also been made in development of equipment for use of insecticides.

One of the newest methods to appear is the vaporization or heat diffusion method used for disseminating organic insecticides into the air for control of certain insects. Although vaporization or subliming is one of the oldest methods of pest control, having been used as far back as the ancients with sulfur, the recent modern development is a far different method and system of pest control. The first electrical vaporizers or converters were made to disseminate DDT in vapor form.

Spear in his recent article in *Soap and Sanitary Chemicals* (1) has made an excellent summary of the insecticide vaporizer development and the present situation. There are, however, various points in relation to this use and much toxicity and deposit data now available which make an additional article of increased value on the subject.

A year or two after the first use of electrical vaporizers or converters with DDT, flies developed DDT resistance, thus reducing the effectiveness of this method of control of flies, which are principally affected by DDT.

* California Spray-Chemical Corp., Richmond, Calif.

** Medical Consultant to American Aerovap, Inc., New York.

Manufacturers and insect control people immediately looked for other insecticides for fly control. Lindane, at that time coming to the front, seemed to be the logical successor to DDT for fly control. Flies did not develop resistance to lindane as rapidly as to DDT and other chlorinated hydrocarbons. In addition, lindane having a melting point of 112° C. and excellent vaporizing quality or vapor efficiency, fitted into this type of application very well.

Development and manufacture of lindane vaporizers has progressed rapidly and at present there is a wide range of converters for using lindane in insect control. These vary from impregnated paper strips to fairly large scale units having a blower incorporated in the machine itself. Most of the vaporizers or converters, however, are units which fit into a wall plug or light socket, and have a separate heat source of their own. All types have their particular use factors and limitations. These converters as manufactured at present are adaptable for use not only in home environments but also to all types of industrial insect pest control applications.

Lindane or other insecticides to be vaporized in most of these units is placed in glass or porcelain receptacles. Metal containers are not feasible due to dangers of reaction between the metals and chemical.

The Interdepartmental Committee on Pest Control, meeting at Washington, D. C., made recommendations concerning the operation of these devices. One specification being that one gram of lindane or chemical should be vaporized every 24 hours to each 15,000 cubic ft. of space. Although this is an approximation, it serves as a basis for operation of the various units. Each unit, of course, must be calibrated to this type of operation depending on temperature, source of heat, the type of container, distance from heat to container, and other factors.

In general, it would seem that the material is disseminated as a gaseous vapor remaining in such state until supersaturation may be reached. It re-sublimes on contacting the air. Air circulation in the average room or

building, of course, eliminates the possibility of saturation as well as much of the vaporized material during the course of 24 hour operation.

Effectiveness of the various types of lindane converters depends on several factors, the first being the proper regulation and adjustment for vaporizing and dispersing the insecticide at the required rate. Proper location of the device in a building is also important and regulations as to distance from floor and ceiling should be followed. Location in relation to air currents and other factors is important. Since the air exchange in buildings is continuous, and air is replaced several times daily in an average building, such factors as proximity to doors, windows or vents must also be considered. Time of day of operating the vaporizer is also a factor. In some cases, best results are obtained by operation of devices during daylight hours. In other cases, it is very possible that efficient operation can be obtained during closing or night-time hours depending on conditions and circumstances. Continuous operation of the unit in a more or less closed space with minimum ventilation naturally results in higher and more rapid insect kill than operation in areas having more rapid ventilation or air exchange.

As to some of the use factors concerned with lindane converters, these might be described as insect control and also lindane adsorption in relation to food as well as human exposure. A considerable amount of test and experimental work has been done on these latter points. Insect control with converters is aimed primarily at flies. Other insects controlled by vaporizers includes mosquitoes, gnats, midges, silverfish, roaches, adult clothes moths, and other miscellaneous household and building insect pests. In the case of flies, mosquitoes, midges, and the smaller flying insects, contact and kill is more or less immediate. In the case of the more resistant insects, continuous and long exposure to the vapor is necessary for control. Although other methods of insect control are available and no doubt more specific, the chief virtue of the vaporization method resides in the economic approach. Because of high wage rates, increased material costs and other factors, the ultimate cost of insect control in enclosed areas is materially lower with the converter method.

There have been numerous questions and much controversy in reference to possible effect of lindane where vaporized from converters on food in restaurants, homes, or other food preparing areas. Some information and data on this has been accumulated which is of interest and shows that for the most part the dangers of food contamination from vapor are not of consequence. For

instance, one example has been cited in which a factory operated device, regulated to dispense one gram of lindane in 24 hours, ran for eight hours. Theoretically this would result in the vaporization or dispersion of one-third of one gram in the 8-hour period. Assuming normal air interchange or exchange in ventilation around windows, doors, etc., it is calculated that one-third of the dispensed vapor would be carried out by normal ventilation and air interchange. Another third of the original third of a gram would be eliminated by traffic in a building including opening and closing of doors, windows and ventilators, housekeeping, etc., with the result that one-third of the original one-third gram is all that could remain in the room as deposited. Were this entire amount of 1/9 gram of lindane deposited on 900 square feet of floor area, a deposit of 0.0001 gram of lindane per square foot of floor area would remain. This deposit is not sufficiently large to be considered dangerous to humans, and converters properly installed and operated will not form heavier deposits of lindane.

Food Effects

WITH reference to lindane absorption by foods, comprehensive tests covering exposures of Aerovap dispersed lindane vapor to eight different foods were made by Mahlon C. Tatro at the University of Massachusetts (2). A summary of his report shows results as follows:

Foods were exposed for varying periods in a room in which a lindane vaporizer was operating under conditions as recommended by the Interdepartmental Committee on Pest Control. The room, of 20,000 cubic feet capacity, was ventilated by three large windows, one on each side, and by two large double doors opening to a hallway. There were many door openings daily and normal ventilation was maintained. Temperature was relatively stable at 68° to 74°F. These tests were run over a period of ten months which enabled seasonal variations to be included along with other factors. Food samples were placed five, 12, and about 20 feet from the vaporizer. Exposed food was placed on flat trays on squares of wax paper, and samples were made a uniform size and weight although there was some variation. Weight loss of lindane from the vaporizer was measured daily. At the time of the last experiments, air concentrations of lindane were recorded. Method of analysis for lindane was that of Schecter and Hornstein (3), reputed to be sensitive to five micrograms of lindane. The same method was also used in the air sampling procedure. Foods selected for testing were based on suggestions of various authorities and included milk, potatoes, bread, cucumbers, pie crust and mushrooms. Following are some of the results on the various food products.

Milk: The possibility of the contamination of milk by lindane has been a matter of considerable concern to those authorities charged with maintaining the purity of milk products. A residual application of lindane to the walls of dairies and milk processing plants has been allowed by the U. S. Department of Agriculture. Under usual conditions of temperature and atmospheric pressure this residue volatilizes some 1.2 grams of lindane daily per 15,000 feet of enclosed space. A lindane vaporizer in the same environment is permitted a vaporization rate of one gram per day. From either source then, what is the amount of lindane vapor absorbed by the milk?

Whole milk was purchased from a commercial concern. Formalin was added as a preservative to both the exposed specimens and the controls. The specimens were poured into half-pint, wide-mouthed bottles, and placed in the three positions described above, and subjected to lindane vapor exposure. It is obvious that after the first few days of exposure the milk would not have been considered as an article of human food.

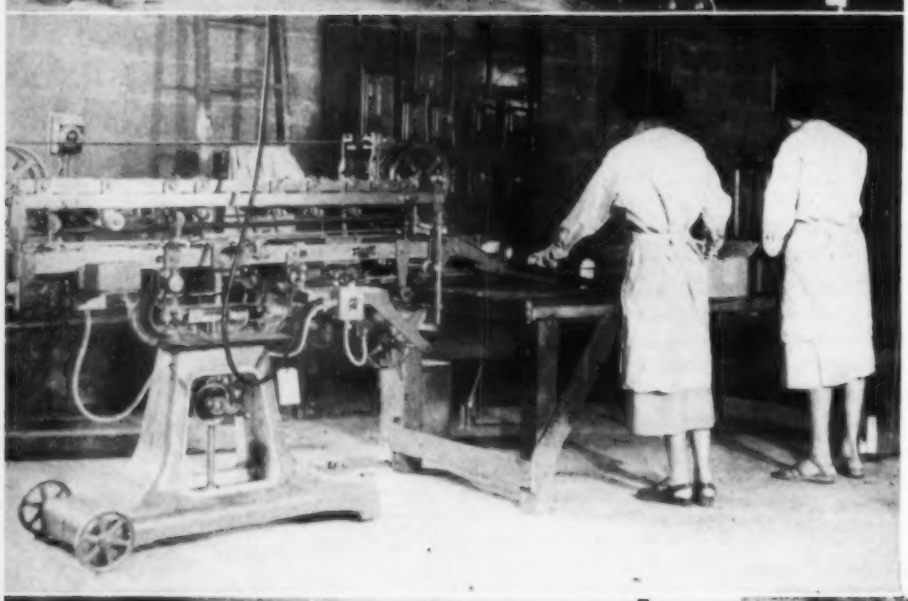
During a thirteen week period, five analytical determinations were made. Two hundred milliliters of milk constituted the size of each sample. No evidence of lindane absorption was found in four of the samples including the one of longest exposure. The specimen examined after seven weeks of exposure produced an estimation of .05 P.P.M. This observation was not considered significant as denoting a lindane absorption.

As a corrolary to this experiment a lindane converting unit was installed in a dairy barn; lindane vaporization being maintained at a rate of one gram per 24 hours over a period of 13 weeks. Although air concentrations were not chemically measured from this environment, observers from the University of Massachusetts department of entomology considered that adequate fly control was being maintained. The dairy cattle were exposed continuously to this lindane vapor during the course of the observation. Milk samples were taken biweekly over this period of 13 weeks. On analysis, no lindane was recovered from any of the samples. It would thus appear that no lindane contamination of milk results from appropriate applications of lindane either as a residual or as a vapor.

Raw Potatoes: Small uncooked potatoes were exposed over a period of two months. Prior to analysis, the specimens were rinsed with cold water. The daily accumulation rate of lindane by the potato samples was a mean of .014 P.P.M. The range of accumulation in a two months' period was from 1 to 2 P.P.M., for that of one month it ran from 0 to 1 P.P.M.

Bread: Only one series of bread samples was exposed to the effects of lindane vapor. For the samples, a commercially baked and sliced bread was purchased; the slices cut into quarter squares and exposed on waxed paper. The original three positions of distance placement were used. This study was continued over a period of fourteen weeks, with weekly determinations of the amount of lindane absorbed by the samples. Here, the lindane was vaporized at rates which varied from one gram to about two and one-half grams per twenty-four hours. It was found that each sample of bread analyzed had been exposed to an amount of vapor produced by vaporizing lindane at a mean rate of 1.688 grams daily. When the base rate of one gram of lindane vaporized daily was applied to the findings mentioned above, the average daily absorption of lindane by the samples became .35 P.P.M.

(*Turn to Page* 141)



Coast's

Par Industries

ESTABLISHMENT of a high-speed, fully automatic aerosol loading operation capable of filling over eight million containers a year was announced recently by Par Industries, Inc., located at 2193 E. 14th St., Los Angeles. Responsible for the setting up of this new plant, according to Edward L. Mosier, president of Par, is the great influx of trade which has taken place west of the Rocky Mountains in the past few years.

Each of the machines on the production lines is custom built, and incorporates many new improvements designed to reduce costs and increase output. All are designed to handle aerosol products of every type and description including insecticides, deodorants, shampoos and cosmetics, surface coating sprays, paints, lacquers, lotions, hair lacquers, concentrates and pharmaceuticals, etc.

The new Par operation provides manufacturers with custom load-

Newest Aerosol Loader

Opens New Automatic Filling Plant in Los Angeles

ing in the west with fast, economical distribution without the need for maintaining excessive inventories, according to Mr. Mosier. He also points out that savings on freight may be a factor in inducing eastern manufacturers to have their aerosol products loaded at the new Coast plant.

Technical director of the organization is Lewis S. Lawson, a veteran aerosol chemist who recently joined Par. He will supervise and direct the complete laboratory facilities maintained by Par to assist manufacturers and distributors with formulations and other problems arising in connection with aerosol packaging.

The photographs accompanying this article were taken recently at the company's 10,000 square foot factory. They give some indication of the plant's operation.

* * *

Photograph at top left shows operation of the filling line where "Freon" and the concentrates are loaded into the aerosol cans. Spot checks are made at this point to verify proper filling weights and correct functioning of valves. The fillers are controlled electronically.

* * *

After testing (center, left), the aerosol containers are fed through a Burt labeling machine which applies paper labels. This latter operation is eliminated if lithographed cans are indicated.

* * *

Photograph at bottom left shows a typical scene in the research and testing laboratory of Par Industries.

* * *

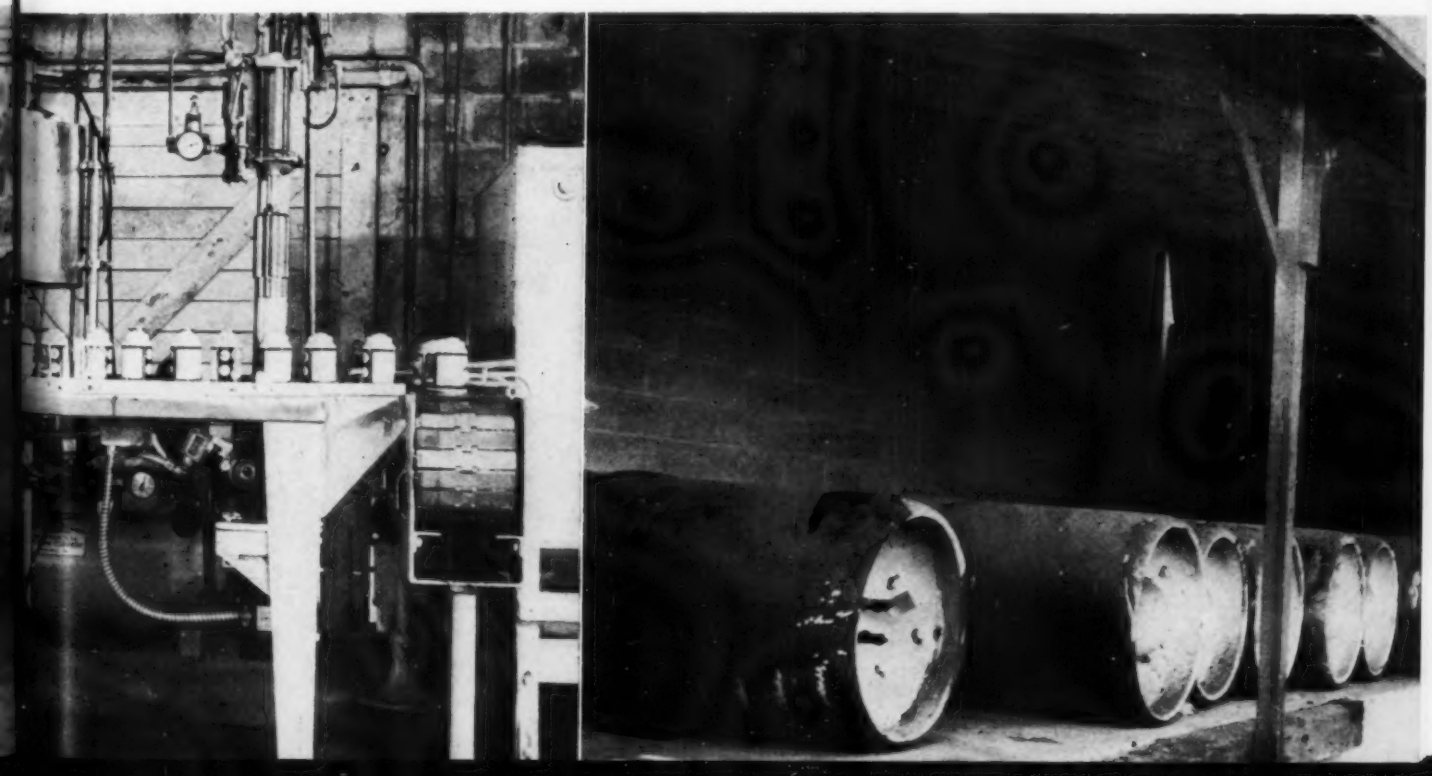
One of the laboratory assistants (bottom, right) weighs and mixes some of the ingredients which go into an insecticide formulation. Not only are laboratory samples prepared from original concentrates furnished by the manufacturer for sample purposes, but each batch is individually checked to make certain that the final product is comparable with the original laboratory sample.

* * *

An improved water bath is shown at extreme right of photograph at lower left on this page. This bath represents the latest word in reducing the temperature of the can from approximately minus 20° F. to plus 130° F., as required by the Interstate Commerce Commission. After the cans emerge from the water bath, they are again tested by an experienced operator for weights, valves, etc.

* * *

Photograph at bottom right shows some of the 3,550 pound drums of "Freon" of which the company maintains an adequate supply at all times. Various types of "Freon" are necessary, depending on the kind of aerosol spray required in the product.



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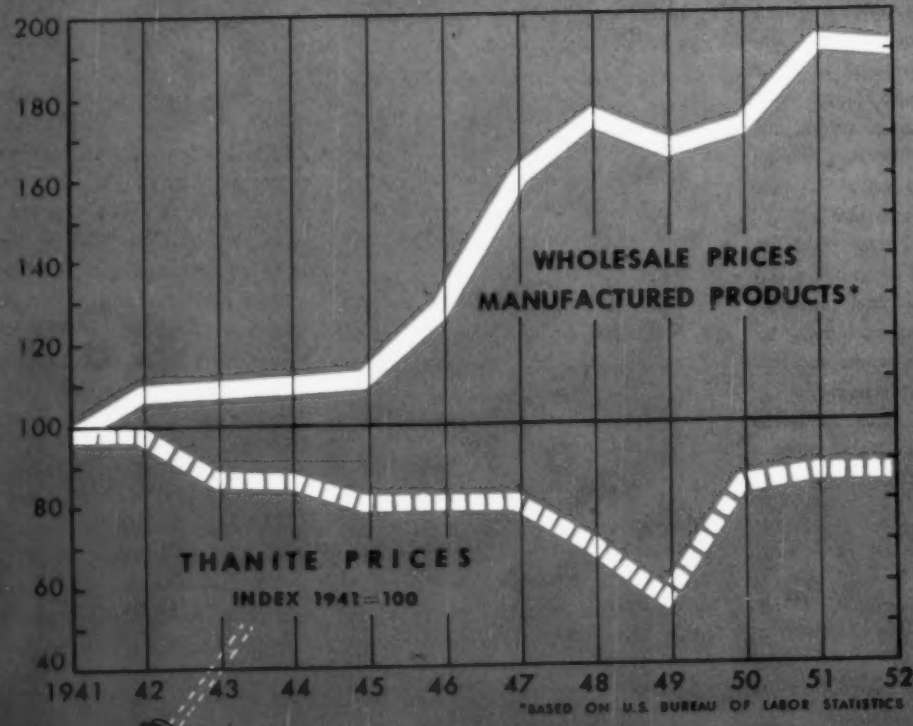

Thanite has no equal for downright economy in household sprays, livestock sprays, and aerosol formulas. This toxicant is low in cost. Its price record is outstanding; in fact, Thanite is lower priced today than it was when introduced in 1940.

Take a look at the price of Thanite compared to the national average of manufactured goods. Such a price history is important for future planning by spray manufacturers. Thanite is manufactured in the United States from raw materials produced in the United States. This indicates continued availability at economical and reasonable price levels.

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Jobber's Salesmen Partners

MAKING salesmen a part of the organization has been a leading factor in the business building efforts of the Trade Supply Co., Alexandria, Va. This approach serves a two-fold purpose. Primarily, salesmen work on a basis of being self-employed. They develop sales connections and maintain them, knowing that their incomes and profit-percentage are based on such contacts. Secondly, making salesmen feel they "belong" tends to hold salesmen and thus reduce turn-over in an industry noted for its high rate of change in sales personnel.

Albert Rothschild (left) and Marlowe Solomon partners of Trade Supply Co.

"Our salesmen are made to feel as if they are self-employed. Their salaries are based upon their earnings and their yearly bonus is related to their over-all sales record," says Marlow Solomon, Trade Supply Co. partner. "And by making them partners in the operation of our firm, we have developed a wonderful sales force."

In order to demonstrate how they participate in the yearly earnings of this aggressive sanitary supply house, salesmen are shown exactly how the firm's money is spent, its profit and incomes.

The salesmen are shown the net profits that are made on various classifications of merchandise and products. Charges made against these products, such as handling, warehousing, general overhead and commissions on their sale, are explained to salesmen. This shows the salesmen just how much profit is left on the sale of products in certain classifications.

"To go deeper into the way we try to instruct our salesmen in the fundamentals of our business, we teach them how much the wholesale price is on a dozen brooms of a certain type," Mr. Solomon explained. "They know what the brooms are being sold for and so they can determine the profit.

"From this figure salesmen are shown the amount of commission that they receive, and the proportionate cost of handling, warehousing and other general and administrative expenses so that they actually know what the remaining profit is. From time to time we break down different merchandise classifications this way for our salesmen so that they know the final base profit after all deductions. And every year, based on this final profit figure, we distribute the earnings to the salesmen."

Mr. Solomon has found that by placing these figures boldly before his salesmen that they show greater interest in the firm and in turn salesmen generate more sales pressure. Rather than have salesmen continually disappointed because they vision excessive profits for the firm through their efforts, they are taken into "partnership" with this firm.

"When salesmen see on how close a profit margin we operate just to produce volume sales, they apply greater energy to their sales efforts," Mr. Solomon explained. "The second incentive of the salesmen is the knowledge that they profit annually if the firm's earnings increase, which is one more reason for them to produce business."

From time to time, salesmen will total sales, make rough deductions so that they have an idea of how much their yearly bonuses will be. This provides salesmen, all of whom are paid on a straight commission basis, with a feeling of proprietorship in the firm.

The Trade Supply Company, just five years old, moved to its present location from the original quarters because its business growth necessitated additional space made necessary for expansion purposes. Officers are Mr. Solomon and Albert Rothschild, partners.

The bulk of this firm's business is with trailer camps, motels, restaurants and retail stores. There are few hotels of any notable size in the Alexandria vicinity or even close by. Salesmen cover all adjacent territories, such as Falls Church, Arlington, Fairfax and other Virginia locali-

(*Turn to Page* 137)

Office and warehouse of Trade Supply Co., Alexandria, Va.

Tests show reduction of skin bacteria on hands with "DYSEPT" containing hexachlorophene

This new liquid soap perfectly meets the needs of surgeons, physicians, hospitals, clinics, restaurants—any application where it's important to maintain skin bacterial population at a minimum level. Independent laboratory tests demonstrate that convenient "DYSEPT"—with 5% hexachlorophene to the anhydrous soap content—is both bactericidal and bacteriostatic with continuous daily use. Charts show percentage reduction.

CHART No. 1. Percentage reduction in resident bacteria on hands with continuous daily use of undiluted "DYSEPT" for 4 consecutive days. Tests actually ran over 5-day period. "Zero" days represents bacterial population before use of "DYSEPT."

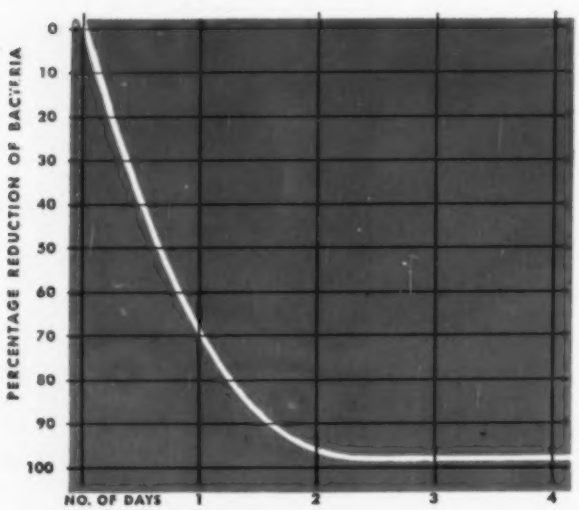
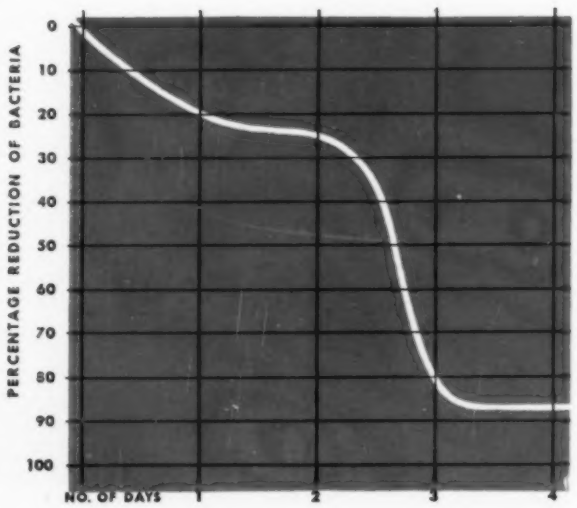


CHART No. 2. Percentage reduction in resident bacteria on hands with continuous daily use of "DYSEPT" diluted 1:1 with water for 4 consecutive days. Again, tests actually ran over 5-day period. "Zero" days represents bacterial population before use of "DYSEPT."



NOTE THESE FACTS ABOUT THE USE OF "DYSEPT"

"DYSEPT," containing 1% hexachlorophene to the total volume, leaves an invisible film not removed by rinsing which, with application one to three times daily for at least five days a week, reduces bacterial skin flora to about 5% of the usual amount and maintains that level. It has been found to reduce surgical scrub-up contact time with daily use. "DYSEPT" is non-toxic and non-irritating, and acts effectively even when diluted with water. A clinical brochure, with laboratory reports, suggestions for using and other technical data, may be obtained by mailing the coupon. "DYSEPT" is available through all Davies-Young distributors.

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The Detection of

Additives in Vegetable Waxes

...THE USE OF INSTRUMENTAL ANALYSIS

By Charles J. Marsel[1], Cyril S. Treacy[2], Howard Brenner[1], and Frank De Long[1]*

[1] Department of Chemical Engineering, New York University.
[2] Mamaroneck Chemical Corp., Mamaroneck, N. Y.

THIS paper is the second in a series devoted to the detection, identification and quantitative determination of additives in vegetable waxes. The investigation is being pursued jointly by the Department of Chemical Engineering of New York University and Mamaroneck (New York) Chemical Corp., in an attempt to evolve standard, routine analytical procedures. The previous work dealt primarily with solvent extraction (1).

The problem resolves itself into determining whether some additive is present, and identifying the substance, quantitatively if possible. Instrumental examination of the suspect sample can be a powerful tool in such analysis. The instrumental aids considered were the refractometer, infrared spectrometer and X-ray diffraction unit. The first two were found to be of considerable value.

Logically, the first step is to establish the presence of an additive. Refractive index has been so used with considerable success.

Refractive Index

ONE of the simplest and most reliable tests of the purity of a substance is the refractive index. A refractive index value can be easily and quickly obtained, and needs only a drop of test sample. Waxes are naturally occurring substances, and as such would be expected to exhibit some variation in refractive index, depending on the source, quality, and method of refining. Therefore, it was necessary initially to establish such natural variations.

The major part of the investigation was concerned with carnauba wax. However, the procedures developed are sufficiently general in their application to other waxes. Refractive indices for carnauba vary considerably with temperature, as shown in Table I. The temperature selected for this work was 100° C. for two important reasons: (1) All the vegetable waxes (including those containing additives) are liquids at 100° C., contributing greatly to the ease of measurement; and (2) This temperature is easily obtained and controlled to ± 0.1° C. by using atmospheric steam; accurate temperature control is essential because of the variation of refractive index with temperature.

TABLE I. Refractive Index of Carnauba Wax at Various Temperatures

Temperature	Refractive Index	Reference
40°C ...	1.4672-1.4701	(4)
	1.472	(3)
60°C ...	1.463	(2)
90°C ...	1.4496	(2)
100°C ...	1.4457-1.4478	This investigation

Test values were obtained on an Abbe Refractomer with steam in the heating coils of the instrument; the results are reported as No 100°.* Tables II, A and B, represent a summary of the refractive indices of the waxes so obtained.

A series of tests on nineteen samples of carnauba wax of known purity indicated a variation in refractive index of from 1.4457 to 1.4478 with a mean value of 1.4469. Repeated tests on the same sample showed a reproducibility of $\pm 0.0002_x$ units. The samples tested included crude, refined, and bleached carnauba and, in addition, included all of the commercial grades by which the wax is commonly designated. The magnitude of this variation is sufficiently small so that the presence of an additive in the wax can easily be detected, providing the additive possesses a refractive index appreciably different from that of the pure carnauba.

If two substances having approximately the same molecular weight are mixed, then the refractive index of this mixture will be given by a "weighted-average" of the refractive indices of the two pure constituents. Thus, if a pure carnauba wax ($n_D^{100} = 1.4472$) has added to it five per cent of "Durez-219" resin ($n_D^{100} = 1.543$), then the refractive index of the resultant product will be approximately:

$$1.4472(0.95) + 1.543(0.05) = 1.4520$$

The measured refractive index of the above mixture was 1.4510.

To illustrate the relationship between the refractive index and composition of sample, a series of mixtures of carnauba wax and Durez-219 ranging from O to 80 per cent additive were prepared, and their refractive indices measured. The results are depicted graphically in Figure 1, illustrating almost linear relationship be-

* Paper presented before 38th Midyear Meeting C.S.M.A., Boston, June 9, 1952.

* Uncorrected for the change in refractive index of the glass prism with temperature.

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TABLE II-A. Refractive Index of Various Waxes at 100° C

Wax	Refractive Index at 100° C	No. of Samples
Carnauba	1.4457-1.4478	19
Candelilla	1.4514-1.4523	4
Ouricury	1.4478	1
Paraffin	1.4212-1.4260	2
Microcrystalline	1.4405	1
Beeswax	1.4329	1
Spermaceti	1.4252-1.4257	2
German Montan	1.467	1

TABLE II-B. Refractive Index of Paraffin and Microcrystalline Waxes

Trade Name and/or Melting Point	Manufacturer Microcrystalline Waxes	Refractive Index at 100°C
Be Square Special Wax 190-195°F (Amber) ...	Bareco Oil Co., Tulsa, Okla.	1.4406
Victory Wax 165°F — Amber	Bareco Oil Co., Tulsa, Okla.	1.4440
Star #100	Bareco Oil Co., Tulsa, Okla.	1.4405
Aristowax 143-150°F ...	Petroleum Specialties Co.	1.4265
Aristowax 160-165°F ...	Petroleum Specialties Co.	1.4302
Atlantic Paraffin #115...	Atlantic Refining Co.	1.4237
		1.4372
		1.4405
Paraffin Waxes		
Medium Paraffin 52°C.....		1.4212
Fully Refined Paraffin 143-150°F.....		1.4260

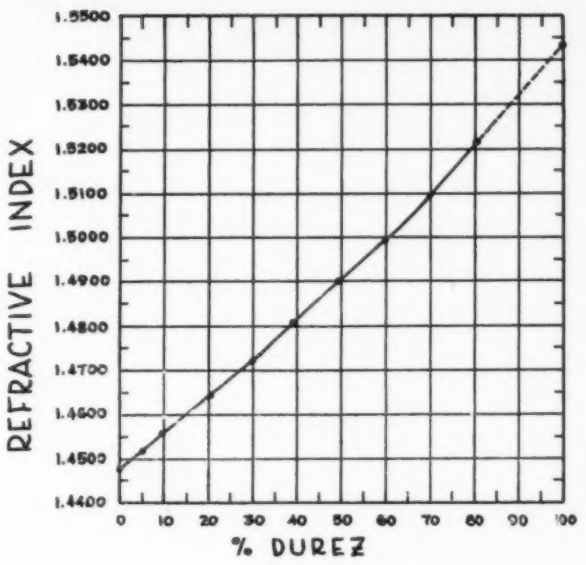

Figure 1

Refractive Index of Extended Carnauba Wax vs. Percentage Durez Present

tween refractive index and composition.

Obviously, if a suspect sample is found to have a refractive index of 1.4510, or higher, then it may be presumed that the wax contains additive, since the refractive index occurs significantly above the range of 1.4457-1.4478 established for pure carnauba. Furthermore if the identity of the additive can be ascertained (by a technique outlined later), then it is possible to make a quantitative estimate of the degree of sophistication. For instance, if the additive discussed above was established as Durez-219, then, utilizing the known refractive index of 1.543 for this material, the minimum possible percentage of Durez present, Pmin (based on a maximum refractive index for pure carnauba of 1.4478), will be given by:

$$1.4478\left(1-\frac{P_{min}}{100}\right)+1.543\left(\frac{P_{min}}{100}\right)=1.4510$$

$$P_{min} = 3.4\%$$

Similarly, the maximum possible amount of Durez present in the wax (based on a minimum refractive index for pure carnauba of 1.4457), will be 5.4 per cent. Evidently, then, the Durez content of the wax lies somewhere between 3.4 and 5.4 per cent. This result compared favorably with the known value of five per cent.

In order to generalize the technique, mixtures consisting of a pure No. 3 N.C. crude carnauba wax ($n_D^{100} = 1.4472$) and five per cent of certain common additives were prepared and their refractive indices determined. A similar study was also conducted using a pure refined prime candelilla ($n_D^{100} = 1.4520$) as the vegetable wax. The results are presented in Table III.

From a study of the refractive indices of the pure additives listed in column A, Table III, certain generalizations become apparent: (a) All the resins tested, (Nos. 1-7) both natural and synthetic, have refractive indices significantly greater than that of both the pure carnauba and candelilla; and (b) The "low-melting" additives (Nos. 7-13) have refractive indices which are less than those of the pure vegetable waxes.

All the additive carnauba wax studies were performed using a carnauba wax having a refractive index of 1.4472. It can reasonably be assumed that if the determinations were

Table III. Refractive Index Study on Extended Carnauba Wax

Additive	Refractive Index of Pure Additive	Refractive Index of Carnauba + 5% Additive	Calculated Amount of Additive Present
Shanco #300	1.532	1.4510	3.8-6.1%
Lewisol #28	1.520	1.4505	3.7-6.5%
Durez #219	1.528	1.4510	4.0-6.4%
Damar Singapore #1.....	1.511	1.4508	4.8-7.8%
Batu East India.....	1.512	1.4500	3.4-6.5%
Piccolyte S-115	1.508	1.4504	4.3-7.5%
#1047 Fine Melt Pale Congo.....	1.520	1.4501	3.2-5.2%
Hydrofol Glycerides—Code 200.....	1.4425	1.4469	0-17%
Paraffin Wax (143-50°F).....	1.4260	1.4461	0-7.8%
I.G. Wax—KPS	1.4420	1.4469	0-18%
Spermafol #52	1.4272	1.4461	0-7.8%
Spermaceti	1.4257	1.4461	0-7.8%
Dark Refined Candelilla.....	1.4514	1.4477	0-35%
Pure Carnauba Wax.....	—	1.4472	—

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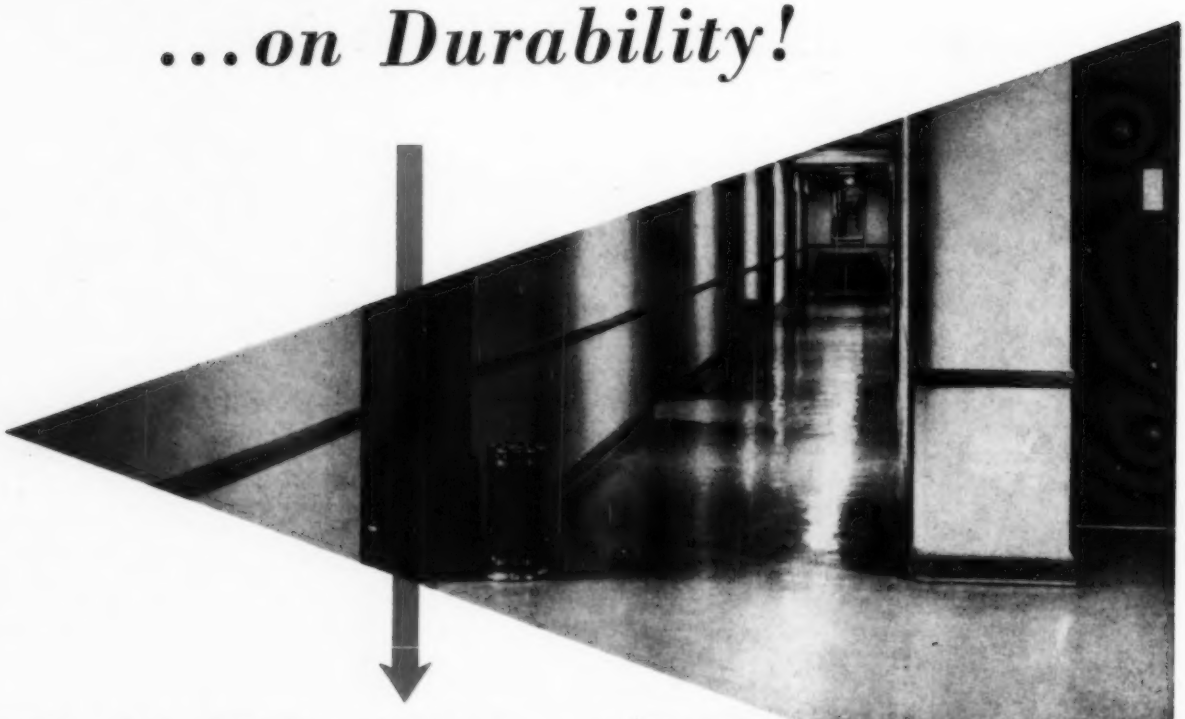

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TABLE IV. Refractive Index Studies on Pure Carnauba Wax Extracts

Refractive Index of Original Wax	Refractive Index of Residue (Raffinate)	Weight of Extract, Grams	Refractive Index of Extract
1.4472	1.4438	—	1.4637
1.4470	1.4452	1.163	1.4593
1.4465	1.4450	0.915	1.4692
1.4478	1.4449	0.919	1.4692
1.4469	1.4452	1.010	1.4601
1.4470	1.4452	0.844	1.4670
1.4457	1.4437	1.167	1.4609
1.4470	1.4450	0.872	1.4668
1.4470	1.4451	1.197	1.4616
	Range of Variation		
1.4457-1.4478	1.4437-1.4452	0.844-1.197	1.4593-1.4692

TABLE V. Refractive Index Studies on Additive-Enriched Extracts

Extract of Carnauba + 5% of each of the following:	Weight of Extract, Grams	Refractive Index of Extracts
Shanco #300	1.173	1.4932
Lewisol #28	1.229	1.4771
Durez #219	—	1.4918
	1.375	1.4908
Damar, Singapore #1	1.358	1.4778
Piccolyte S-115	1.203	1.4812
Batu East India	1.130	1.4809
#1047 Fine Melt Pale Congo	1.229	1.4772
Hydrofol Glycerides, Code 2000	1.208	1.4688
Dark Refined Candelilla	—	1.4580
Paraffin (143-50°F)	—	1.4541
(Ext:act) Pure Carnauba	—	1.4637

carried out on a carnauba sample having a refractive index of 1.4457 (the lowest value encountered), then all of the refractive indices measured would be lower by approximately 0.0015 units.

More conclusive results could be obtained if the additive could be concentrated in some way, and the refractive index read for such an enriched sample. A technique for obtaining such an enriched fraction, using solvent leaching technique has been developed in these laboratories and described previously. (1) This procedure utilizes the fact that vegetable waxes are only sparingly soluble in chloroform, whereas all the additives studied are extremely soluble in this solvent.

Basically, the extraction operation is as follows: A carefully weighed sample of finely powered wax (10 g.) is agitated with 100 ml. of chloroform for a suitable length of time. The suspension is cooled to 0° C., and filtered, resulting in an additive-enriched filtrate from which the solvent is evaporated and the resultant extract weighed. Again, however, the normal variations on the extracts of pure carnauba wax must be delineated.

Table IV contains the results of a series of extractions conducted on nine different carnauba wax samples of known purity, containing no additive.

The figures tabulated in the last column of Table IV indicate a variation of from 1.4593 to 1.4692 in the refractive index of the extracted fraction. The fact that these results are significantly above the original values of 1.4457-78, indicates that the carnauba has undergone selective extraction, in which the higher index of refractive portion has dissolved, leaving behind a residue poorer in this material. This behavior is also indicated by the low retractive index of the corresponding residues (1.4437-1.4452).

Additional extraction tests have indicated that the seemingly large variation in extract refractive index is a natural variation, rather than a matter of extraction technique —the reproducibility on a given sample being better than ± 0.0005 units.

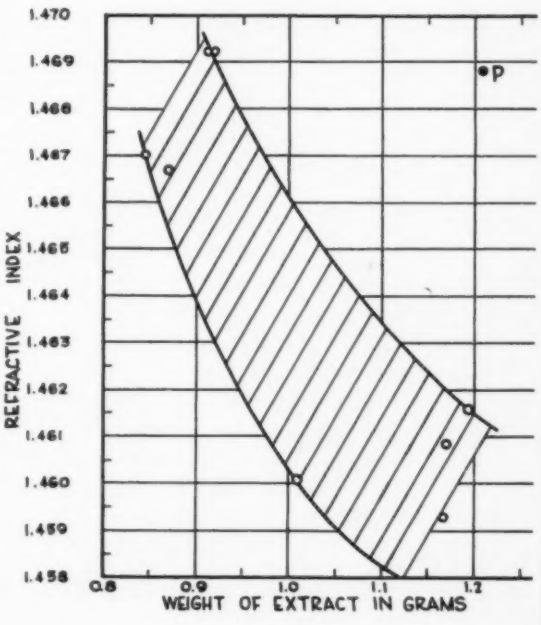
Mixtures consisting of carnauba wax adulterated with five percent of additive were subjected to the extraction conditions described previously. The results of a refractive index study on this group of samples are presented in Table V.

It will be noticed that the resinous additives yield refractive indices which are considerably above the range of values of 1.4592-1.4692 established for pure carnauba.

These results are consistent with those obtained previously and serve to indicate the presence of resins with a greater degree of confidence than is possible using the prior technique. The extraction technique also has the advantage of pointing out paraffin when it is present in the original wax concentrations of five percent or more.

At first glance it might appear that hydrofol glycerides and similar substances, which lie in the range obscured by pure carnauba, cannot be detected by extraction. However, a careful examination of the data given in Table IV shows a correlation between the weight of carnauba extracted and the refractive index of the extract. It appears that the refractive index of the extract drops as the weight of extract increases. This relation is indicated by the shaded area in Figure 2. The extraction data for hydrofol glycerides (Weight = 1.208 g., n_D^{100} = 1.4688) is indicated on the diagram by point "P," which evidently falls outside the carnauba range and thereby proclaims the presence of an additive.

(To Be Continued)



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C. S. M. A. Set to Meet in New York, Dec. 7-9

THE Chemical Specialties Manufacturers Assn. has just announced the following program details for its 39th annual meeting to be held Dec. 7-9, at the Hotel New Yorker, New York.

At the luncheon meeting, December 8, the featured talk will be given by Paul S. Willis, president, Grocery Manufacturers of America. The luncheon on December 9 will be dedicated to the recognition of the 20th anniversary of the Peet-Grady method.

Papers to be presented at the general sessions are: "Assistance to the Small Chemical Industries" by Harry Fleisher, Small Defense Plants Administration; "Automatic Height-of-Fill Inspection of Canned and Packaged Products" by H. Schreiber, Jr., General Electric Co., Milwaukee; "Federal and State Pesticide Acts" by J. D. Conner, Counsel of CSMA, Washington; "Products Liability" by George Burroughs, Washington. There will be motion pictures of industrial interest.

Automotive division: Symposium on automobile polishes, cleansers, and waxes, covering modern trends in auto cleaning, polishing and waxing; waxes versus silicones and resins; combination cleaners and waxes; new ingredients for polishes; protective value of polishes and waxes paste versus liquid waxes; and future developments. Symposium on aerosols in the automotive field.

Aerosol division: Symposium on aerosol foam products. Awards in annual aerosol packaging contest.

Disinfectant and sanitizers division: Monday morning: "Food Plant Sanitation" by Eugene J. Gerberg, director of Insect Control and Research, Inc., Baltimore; "Disinfectants and Germicides, Antiseptics and Sanitizers —Their Role in Public Health" by Alvin R. Jacobson, Ph.D., associate professor, Sanitary Science, Columbia University School of Public Health, New York; "The Part the Quartermaster General Testing Laboratories Play in the Procurement of Disinfectants" by Edward F. Williams, chief chemist, Philadelphia Quartermaster Depot, U. S. Army, Philadelphia; "Fundamentals of Mildew Prevention" by S. S. Block, associate professor, University of Florida, Gainesville. Tuesday afternoon: Claude J. Augio, research chemist, Airkem, Inc., New York will speak on a subject as yet unannounced, "Mode of Action of Germicides, No. 11" by Dr. S. Boyk, Ottawa Chemical Co., Toledo; "Sanitation in the Meat Packing Industry" by Richard E. Day, Office of District Sanitarian, Armour & Co., New York.

Insecticide division: Monday morning: Address of division chairman, James A. Green, Standard Oil Co. (Indiana), Chicago; "Use of Insecticides in Stored Products" by Randall Latta, U. S. Department of Agriculture, Washington; Symposium on "Fog Machines for Dispensing Insecticides" with E. J. Campau, Standard Oil Co. (Indiana), Whiting, Ind., as moderator, and the following participants: A. H. Yeomans, U. S. Department of Agriculture (Fog Aerosol Machines), W. B. Stevens, Socony Vacuum Oil Co., New York (Formulations), E. J. Hansens, Rutgers University, New Brunswick, N. J. (New Jersey Fly & Mosquito Control Programs), J. V. Osmun, Purdue University, Lafayette, Ind. (Scope of Use), and F. K. Harder, Harder Exterminating Co., Hempstead, N. Y. (Practical Experience with Fog Generators); "New Developments in Livestock Insecticides" by Ray L. Cuff, National Livestock Loss Prevention Board, Kansas City, Mo.

Tuesday afternoon: Report of Scientific Committee by D. F. Starr, S. B. Penick Co., Jersey City; "New Developments in Rodenticides" by Karl P. Link, University of Wisconsin, Madison; "Sales of Insecticides in Retail Outlets" by P. C. Olson, *Drug Topics*, New York; symposium on "How Various People Look at Labelling" with G. S. McInerny, Boyle-Midway, Inc., New York, as moderator and the following participants: S. C. Billings, U. S. Department of Agriculture, Washington (U.S.D.A. Production and Marketing Administration), Sanford Hill, E. I. du Pont de Nemours & Co., Wilmington, Del. (The Technical Man), E. W. Constable, North Carolina Department of Agriculture, Raleigh, N. C. (The State Control Officer), N. M. Walker, Pennsylvania Salt Manufacturing Co., Philadelphia (The Label Designer), and John D. Connor, counsel, C.S.M.A., Washington (The Attorney).

Soap, detergents, and sanitary chemical products division: panel discussion on "The Role of Alkaline Builders in Soap and Detergent Formulations," organizer, Dr. John L. Wilson, Economics Laboratory, St. Paul, and the following panel members: R. H. Sawens, Solvay, carbonates and caustic soda; Dr. William Stericker, Philadelphia Quartz Co., silicates; Max Metziger, Blockson Chemical Co., phosphates; Dr. L. B. Parsons, Lever Brothers, big soapers as users of builders; Dr. Samuel J. Miller, DuBois Co., compounder or formulator of specialty products, a different type of user. Papers: "Detergent Marketing" by J. V. Miller, Atlas Powder Co., Wilmington, Del.; "Stain Removal from Plastic Dinnerware" by J. L. Wilson, Economics Laboratory, St. Paul; "Industrial Bottle Washing" by Dr. V. Dvorkovitz, Diversey Corp., Chicago; "Non-Ionics, the All-Surface Cleaners" by Manuel N. Fineman, Rohm & Haas Co., Philadelphia; and "Artificial Soils" by J. C. Harris, Monsanto Chemical Co., St. Louis.

Wax and floor finishes division: Monday, December 8: "Problems in Making Small Shipments of Merchandise," speaker to be selected; "Retention of Amines in Wax Polish and Amine Soap Films by Dr. Helen E. Wassell, Mellon Institute for Carbide & Carbon Corp.; "The Place of Montan Wax and Its Derivatives in the Floor Wax Industry" by Dr. Charles Marsel, New York University; and "New Developments in Containers" by a speaker from Inland Steel Co.

Tuesday, December 9: "An Interim Report on Field Performance Tests" by J. B. Snider, General Services Administration; "Petroleum Waxes" by B. H. Clary, Bareco Oil Co., Tulsa; Instrumentation Clinic with Bayard Johnson, Franklin Research Co., Philadelphia, as moderator; "Packaging of Chemical Specialties" by W. L. Hardy; and "Report of Scientific Committee" by H. Mellan, Durez Plastics, North Tonawanda, N. Y.

* * *

OPS Reporting Change

Some decentralization of the filing of reports required under section 6 and 7 of the general ceiling regulation has been effected by amendment #36, issued recently by Office of Price Stabilization.

While the sections apply principally to retailers and wholesalers, they do apply also to small manufacturers, which are defined as manufacturers whose gross sales amount to less than $250,000 a year, and to new manufacturers, whose sales are also below the $250,000 level.

New Monsanto Penta

A free-flowing pentachlorophenol, said to be less dusty, lower in odor and faster dissolving than pentachlorophenol flakes, is available in commercial quantities from Monsanto Chemical Co., St. Louis, it was announced recently.

The new material is in the form of irregularly shaped pellets ranging downward in size from one-eighth inch. It is produced by treating regular "Santophen 20," the company's pentachlorophenol flakes, with a specially selected oil at a rate of three pounds of oil to 100 pounds of pentachlorophenol.

Pentachlorophenol, commonly called penta, is a wood preservative and herbicide first produced in commercial quantities by Monsanto.

Monsanto sells oiled penta in drum quantities only, packed in fibre drums containing 103 pounds of oiled penta, or 100 pounds of penta and three pounds of oil. The price is the same as that for 100 pounds of regular penta.

HAND CLEANERS

Put your organization and your customers in the position of benefiting from the "know-how" gained during 40 years of making better and better hand cleaners.

WORKERS like the quick-lathering, gentle scrubbing, easy-rinsing action of Mione. And its very definite skin conditioning value.

MANAGEMENT likes the safe, sanitary, efficient, trouble-free Mione features, plus its economy per pound, low cost per scrub-up, and the basic economy of skilled hands always at top productivity.

EVERYONE who sells washroom supplies will be interested in the competitive price structure, the handsome jobber discount, and the steady repeat orders that come from complete consumer satisfaction.

MIONE SPECIAL Containing G-11* (Hexachlorophene)
is a GREAT new soap with GREAT profit possibilities
Full details on request
**Trade mark of Sindar Corporation*

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Makers of famous hand soaps for 40 years
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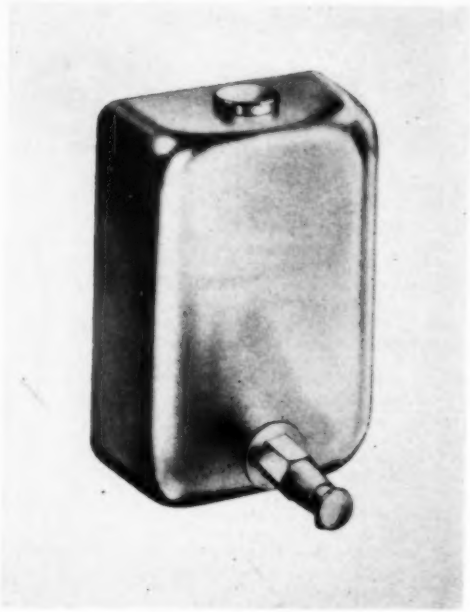
have you ever seen a SOAP DISPENSER to match this?



No. 500-C Liquid. Available also for lather — No. 550-C.

Here's the "Miss America" of soap dispensers!
Heavy gauge steel tank, *triple plated* — copper, nickel and finally gleaming rich satin chrome.
It holds 40 ounces. That's enough to serve thirty people for a full busy month.
Has the famous Moore Brothers valve, Neoprene washer equipped. No leak, no drip, no clog; and the Moore theft-proof, lock-top cap. Easy filling, of course.
Takes only a few minutes to install. No plumbing connections. No skilled labor required.
Your customers will welcome this beautiful, heavy duty and completely efficient dispenser. Users will keep it busy, which means more and more soap sales for you.

We make soap dispensers of every type — liquid, powder, lather, lotion. Models to meet every price requirement and any location. Back of every Moore Brothers soap dispenser is more than forty years' experience in producing only quality dispensers.

WRITE FOR CATALOG SHEET & PRICE LIST

MOORE BROTHERS COMPANY
101 WARREN STREET NEW YORK 7, N. Y.

Antiseptic Soap

(*From Page* 41)

The data are tabulated in Table IV and plotted in Figure III. It is apparent that the VL-1 cleanser is equivalent to the hexachlorophene product in its degerming properties.

The effective degerming of the skin resulting from the regular use of the VL-1 powdered skin cleanser leads us to expect that its use in industry would result in marked reduction in the number of cases of skin infection, boils, carbuncles, etc., and that it will greatly reduce the possibility of transmission of diseases communicable by skin contact. This expectation is based on the successful results already obtained with antiseptic liquid soaps. Field testing of the powdered product is expected to provide data on the extent of reduction of infection in industry from its use.

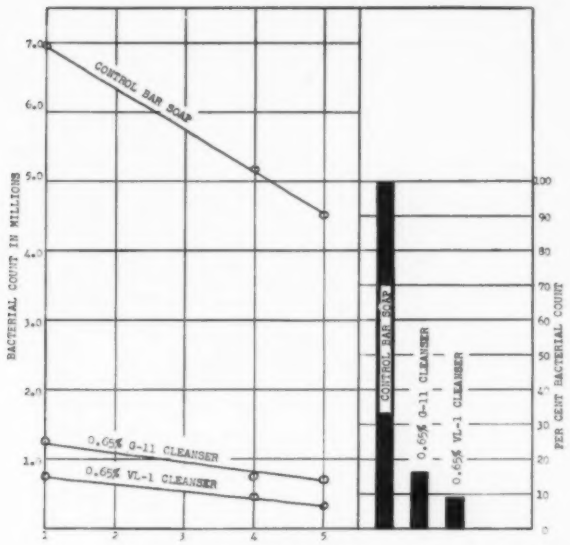


FIGURE III. Control Bar Soap Vs. Antiseptic Powdered Cleansers Containing G-11 and VL-1

5 Subjects, 3 Supervised Washes Daily; Determinations Made on 4th, 5th, 9th and 10th Days of Use; Average Results for 4 Days Plotted

References

1. Bacteriological report on "Septisol," published by Vestal, Inc.
2. Cade, A. R., *SOAP AND SANITARY CHEM.* 26, July, (1950).
3. Gump, W. S., "The Development of a Germicidal Soap" published by Givaudan-Delawanna, Inc., 1945, New York, N. Y.
4. Kraissl, C. J., "Clinical and Laboratory Evaluation of G-11 (Hexachlorophene) as a Preoperative Skin Bacteriostatic Agent," *PLASTIC AND RECON. SURG.*, 5, No. 6, 471 (1950).
5. Maglio, M. Martin, "Antiseptic Soaps," *SOAP AND SANITARY CHEMICALS*, 24, No. 12, 44, (1949).
6. Maglio, M. Martin, "Infection Destroyer—Antiseptic Soap," *HOSPITAL PROGRESS*, February (1949).
7. Maglio, M. Martin, Pollmann, R. McN., and Pollnow, F. J., Jr., "Antiseptic Action of Hexachlorophene in Liquid Surgical Soaps—Aspects of Hexachlorophene Concentration and the Time of the Surgical Wash," presented before the Laboratory Section of the American Public Health Association meeting in St. Louis, Mo., November 3, 1950.
8. Price, P. B., *J. INFECT. DIS.*, 63, 301 (1938).
9. Schwartz, Louis, *MED. CLINICS N. AMER.*, 26, 1195 (1942).
10. Schwartz, Louis, *SAFETY ENG.*, 97, 62 (May, 1949).
11. Seastone, C. V., *SURGERY, GYNECOLOGY AND OBSTETRICS, March*, (1947).
12. Seastone, C. V., and Erickson, T. C., *SURGERY* 25, No. 2, 290 (1949).
13. Traub, E. F., Newhall, C. A., and Fuller, J. R., *ARCH. DERM. SYPH.* 52, 385, (1945).
14. Traub, E. F., Newhall, C. A., and Fuller, J. R., *SURG. GYN. OBST.* 79, 205 (1944).
15. Udinsky, H. J., *J. MED. SOC. of N. J.* 42, 15 (1945).

Table IV

VL-1 vs. G-11 as a Germicide for Powdered Skin Cleansers

5 Subjects; 3 Supervised Washes Daily, 90 Seconds Each; Determinations Made on 4th, 5th, 9th and 10th Days. Basins #1, #4 and #5. Counts to be multiplied by 1000.

Soap	Subject	4th Day			5th Day			9th Day			10th Day		
		Basin 1	Basin 4	Basin 5	Basin 1	Basin 4	Basin 5	Basin 1	Basin 4	Basin 5	Basin 1	Basin 4	Basin 5
Control Bar soap	A	8125	4685	3390	5685	1360	1720	....	....	....	....	....	....
	B	4550	2080	2390	4520	2510	2990	....	....	....	....	....	....
	C	4290	4560	4545	2920	860	1035	....	....	....	....	....	....
	D	24,100	23,625	20,680	10,725	10,050	6475	....	....	....	....	....	....
	E	3360	890	870	1300	1065	540	....	....	....	....	....	....
Averages		8885	7168	6375	5030	3169	2552	....	....	....	....	....	....
0.65% G-11 Powdered Soap	A	698	108	110	168	141	116	100	72	104	97	110	80
	B	529	270	324	162	60	58	806	115	84	634	210	246
	C	2760	1676	1450	1014	952	826	1802	2117	1997	3670	2688	2182
	D	4401	2838	2748	152	82	50	3310	2514	2700	1140	609	480
	E	364	70	34	335	116	87	700	166	101	1218	282	205
Averages		1750	992	933	366	270	227	1344	997	997	1352	780	639
0.65% VL-1 Powdered Soap	A	584	362	180	174	100	70	428	236	190	172	126	66
	B	248	67	63	50	23	18	420	344	132	1900	286	100
	C	466	518	413	870	598	477	96	98	32	1176	432	302
	D	1355	1140	646	2260	1520	891	1184	1244	1058	1780	1840	1440
	E	58	22	13	216	152	89	668	208	140	288	104	66
Averages		542	422	263	714	479	309	559	426	310	1063	558	395

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A light-colored product with a CARNAUBA WAX base.

HAAG STANDARD WAX

A Self-Polishing Wax — HIGH IN LUSTRE, WATER and WEAR RESISTANCE. Light in color, and formulated with a CARNAUBA WAX base.

An excellent floor treatment where more than standard anti-slip qualities are not essential.

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Urge DDT Export Decontrol

REMOVAL of export controls over DDT beginning with the fourth quarter of 1952 was recommended by the DDT industry advisory committee at a meeting with National Production Authority, Department of Commerce, held in Washington, D. C., recently. This reaffirms a similar recommendation made at a meeting held June 3. DDT is currently exported on an open-end quota under licenses issued by Office of International Trade, Department of Commerce. A majority of the committee also recommended that the listing of DDT as a group II material (in approximate balance) in NPA's list of materials and alternates be continued.

NPA estimated 1952 DDT production at 135 million pounds if production for the second half of the year is at the same rate as for the first half. Production for 1953 was estimated at between 130 and 145 million pounds. Production figures on a pesticidal year basis (October 1 to September 30) were presented as follows: 1949-50, 67.3 million pounds; 1950-51, 99.2 million pounds and 1951-52, an estimated 120 million pounds.

Requirement estimates were presented by representatives of three Government agencies as follows: Mutual Security Agency—For Turkey, Greece, Thailand and the Phillipines an estimated 4.9 million pounds of DDT will be needed during the calendar year 1953 largely for malaria control. About 60 to 66 percent will come from the United States.

Office of International Trade—The export estimate of 55 to 60 million pounds for 1953 made in June 1952 is probably high in the light of recent developments. Brazil has slowed imports of pesticidal formulations because of the drought and resulting currency difficulties. The drought in Mexico may also result in that country holding off on purchases. These facts may affect estimated future requirements appreciably because Brazil, Mexico, Turkey and India are the principal consuming countries. Some 14 million pounds of DDT will be needed to meet various Governmental programs such as MSA, World Health Organization, Technical Cooperation Administration and United Nations Internation Children's Emergency Fund.

Department of Agriculture—Domestic requirements for the pesticidal year 1952-53 were estimated at 70 to 80 million pounds of DDT.

P. H. Groggins of NPA's Chemical Division presided. The following members from industry attended:

John F. Kirk, Allied Chemical & Dye Corp., New York; Harold Davies, Calabama Chemical Co., Huntsville, Ala.; Vernon Bishop, Central Chemical Corp. of Lebanon, Lebanon, Pa.; E. R. Brunskill, Cincinnati Chemical Works, Inc., Cincinnati; J. V. Vernon, Food Machinery & Chemical Corp., Middleport, N. Y.; W. E. Gordon, E. I. du Pont de Nemours & Co., Wilmington; J. G. Brunton, Kolker Chemical Works, Inc., Newark, N. J.; Roland R. Place, Michigan Chemical Co., St. Louis, Mich.; H. C. Koehler, Monsanto Chemical Company, St. Louis, Mo.; Dr. Pincus Rothberg, Montrose Chemical Corp. of Calif., Newark, N. J.; R. S. Roeiler, Pennsylvania Salt Mfg. Co., Philadelphia; William J. F. Francis, Pennsylvania Salt Mfg. Co. of Washington, Tacoma; D. F. Murphy, Rohm & Haas Co., Philadelphia; C. F. Gerlach, Wyandotte Chemicals Corp., Wyandotte, Mich.

—— ♦ ——

Court Rules on Krilium

A permanent injunction against Acrylium Corp., Glen Cove, N. Y., prohibiting its use of the word "Acrylium" as a trade mark or company name, has been issued by United States District Court for the Eastern District of New York at Brooklyn, N. Y., as a result of a suit filed in July by Monsanto Chemical Co., St. Louis, it was announced recently.

The injunction also applies to Oscar Zurer and Raymond Zurer as individuals and as partners doing business under the name of Long Island Paint and Chemical Co., which manufactured and distributed a soil conditioner under the trade mark "Acrylium."

In the suit Monsanto charged the Acrylium Corp. and the other defendants with infringing on its trade mark "Krilium" for soil conditioners. The company claimed that the similarity of "Krilium" and "Acrylium" was confusing and misleading and constituted unfair competition as well as a violation of Monsanto's rights in the trade mark.

—— ♦ ——

Smith Rejoins Washburn

Tom Smith has returned to the sales department of T. F. Washburn Co., Chicago, it was announced recently. He succeeds Jake Broncato, who has resigned. Mr. Smith served in Washburn's sales department before the war. He was with the Coast Guard during the entire war period, and has since been engaged in the production of surface coatings.

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Scent in Polishes

Odors in waxes and polishes are discussed in an article carried in a recent issue of *Sindar Reporter*, house organ of Sindar Corp., New York. Odorizing, reodorizing and odor masking of emulsion-type floor wax, solvent-type floor wax, furniture polish, and metal polish, are reviewed in some detail. Varieties and quantities of odorants specially suited for incorporation in each of these groups are recommended.

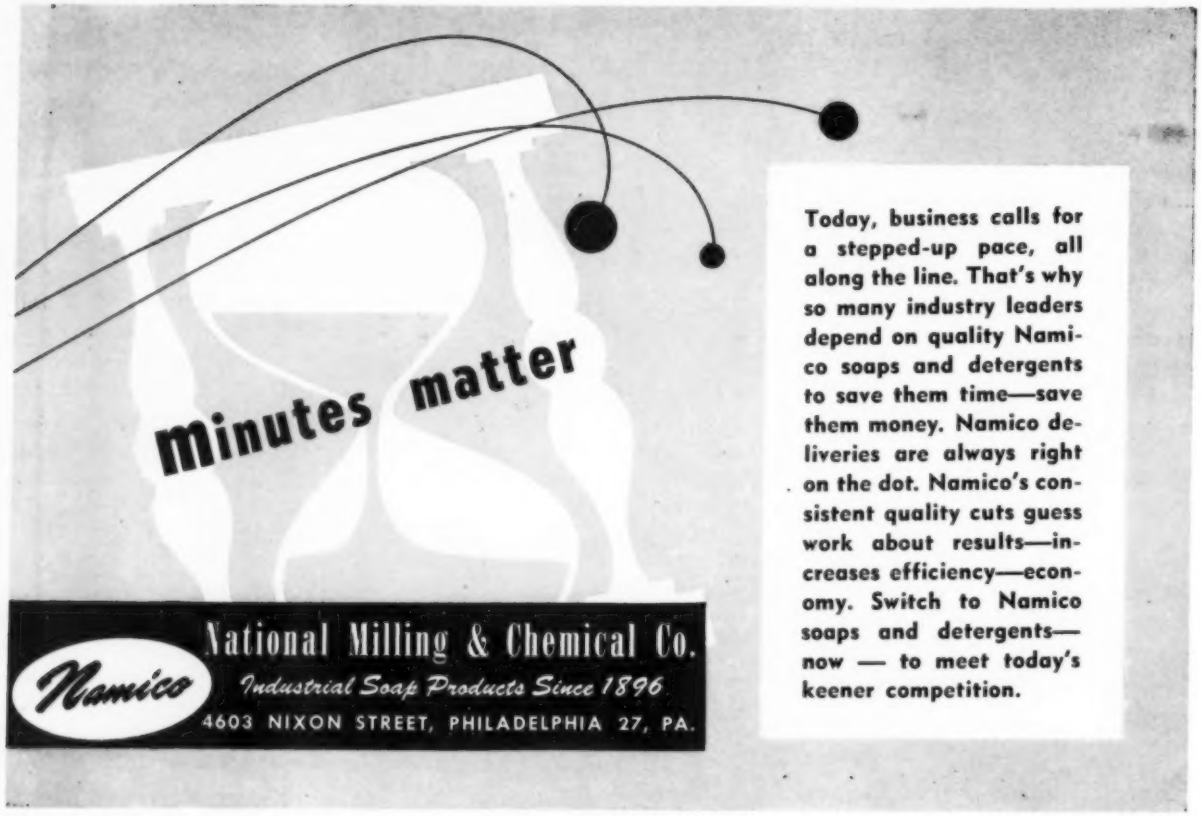
Jobbers Salesmen

(*From Page* 125)

Trailer camps, tourist courts and motels are becoming increasingly numerous. With defense centers opening up and housing becoming more difficult to obtain once again many have turned to these places as living quarters. Sales of sanitary supplies are made to the owners of these areas, with individual residents also prospects. Regular visits are made on a monthly or bi-monthly basis, as the situation demands.

Trade Supply Co. handles a complete line of paper, janitorial supplies and maintenance equipment. These items are listed under the same classifications in the local telephone books, from which the firm receives a large number of inquiries.

Direct mail is the firm's only


minutes matter
Today, business calls for a stepped-up pace, all along the line. That's why so many industry leaders depend on quality Namico soaps and detergents to save them time—save them money. Namico deliveries are always right on the dot. Namico's consistent quality cuts guess work about results—increases efficiency—economy. Switch to Namico soaps and detergents—now — to meet today's keener competition.
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other type of promotion. Every two months a list of specials is offered to customers and prospects. These are seasonal so that there is a demand for these products.

"We maintain a perpetual inventory of all our products so that we have a three months' supply at all times," says Mr. Solomon. "All our merchandise is listed on our records according to classifications. We list our initial inventory, the dates and amounts ordered and the dates and quantities that arrive.

"All our orders are given to the warehouse for filling. As they are made up, the warehouseman makes a list of the products going out. This list is handed into the office at the end of the day. And from this list we can make proper deductions from our inventory sheets. In this way we always have a running inventory of merchandise on hand, what has been ordered and what is coming in."

Merchandise and products are also stocked in the warehouse according to classification. This simplifies withdrawals for filling orders and makes replacing just as easy. Trade Supply Company uses two trucks to make deliveries. Neither truck covers the same area on the same day as the other to expand coverage.

Complexing Agents

(*From Page* 83)

monly defoamed by soaps and neutral fatty glycerides. A particular alkyl aryl sulfonate was found to produce no foam at 0.1 per cent in the presence of 100 ppm lard oil although foam was copious in the absence of the defoamant. The addition of EDTA at 3-5 per cent on the weight of the detergent was found to protect the foam in the presence of lard oil. Neither hydrolysis of the lard oil nor metal ions such as iron, calcium or magnesium were involved.

The detergency behavior of a tallow soap containing 2 per cent Na_4EDTA at 20° C. is compared with that of an unbuilt soap in Figure 1. While the detergency of the unbuilt soap decreases linearly with increasing water hardness, the built soap shows increasing detergent action, reaching a maximum of 100 ppm $CaCO_3$; detergency of the built soap at 270 ppm $CaCO_3$ is equal to that of the unbuilt soap in distilled water, but the total hardness at 270 ppm $CaCO_3$ is more than twenty times what EDTA can handle purely as a complexing agent. Significantly, as the temperature is increased, the building effect is decreased. Although these data pertain to carbon soiled cotton, somewhat similar results have been obtained with greased wool.

In table 1, the effects of EDTA on some representative synthetic detergents are summarized. These, likewise, cannot be explained completely in terms of water softening or complex formation.

Exactly what is involved in these effects cannot be explained at this time. Solubilizing of colloidal micelles might be occurring or perhaps electric charge distribution on these molecules may be the important factor.

References

1. Alrose Chemical Co. (1952): Sequestrene, technical bulletin.
2. Anon. (1950): Effects of Atomic Weapons, p. 328.
3. Bell (1947): *Ind. Eng. Chem.* 39: 136.
4. Bernstein, Fleisher (1950): *Soap & Sanitary Chemicals*, 26 (9): 40.
5. Green (1950): *Ind. Eng. Chem.* 42: 1542.
6. Hazel, Schock, Gordon (1949): *J. Amer. Chem. Soc.* 71: 2256.
7. Jensen, Claybaugh (1951): *J. Dairy Science*, 34: 865.
8. Tompkins, Bizzell (1950): *Ind. Eng. Chem.* 42: 1469.
9. Tompkins, Bizzell, Watson (1950): *Ind. Eng. Chem.* 42: 1475.
10. Topley (1949): *Quarterly Reviews*, 3 (4): 345.
11. Uhl (1951): *Fette u. Seifen*, 53: 84.
12. Van Wazer and others (1950): *J. Amer. Chem. Soc.* 72: 639 ff.
13. Zussman (1948): *Soap & Sanitary Chemicals.*
14. Zussman, Bernstein (1951): *Amer. Oil. Chem. Soc.* Mtg. Oct. 1951.
15. U. S. Patent 2371623.
16. U. S. Patent 2584017.

Table 1

	Percent Soil Removal			
temperature °C	20°		60° C	
ppm $CaCO_3$	0	200	0	200
fatty amide	29.9%	9.8%	26.8%	8.5%
plus SEQ. NA4	46.2	12.9	49.0	9.8
nonionic ether	35.4	35.1	46.2	30.5
plus SEQ. NA4	54.0	35.1	55.5	34.2
alkyl aryl sulfonate	21.8	8.8	15.6	7.4
plus SEQ. NA4	35.0	8.8	33.5	8.7
alcohol sulfate	26.2	12.0	12.6	21.8
plus SEQ. NA4	29.9	16.2	28.5	26.8

Production Clinic

(*From Page* 89)

to round, steel sheet ends by a patented process. The outside is sprayed with a water resistant paint. To assure a liquid tight seal, so as to withstand handling, aluminum foil is laminated to the liner board in several plies, instead of a single layer. This use of several layers makes the drums strong and sufficiently tight to liquids. Pacific Steelfibre Drums, Inc., Alhambra, California, fabricate these drums.

Washburn Floor Care Book

A manual, *Modern Floor Maintenance*, was published recently by T. F. Washburn Co., 2244 Elston Ave., Chicago. The book is intended as a reference volume for those responsible for floor care as well as buyers of floor finishing products. It contains detailed instructions on reconditioning of old and new floors, separate sections being devoted to linoleum, rubber, asphalt tile, wood, concrete, terrazzo, marble and cork. Various operations such as cleaning, sealing, finishing, polishing, renewal, reconditioning, and maintenance are covered, and tested methods suggested. Free copies are available.

At the same time a revised edition of the book, *Modern Emulsions*, was announced by Washburn. This loose-leaf publication outlines constants and uses of the firm's products, and supplies formula information which could serve as starting point for the formulation of water emulsion waxes.

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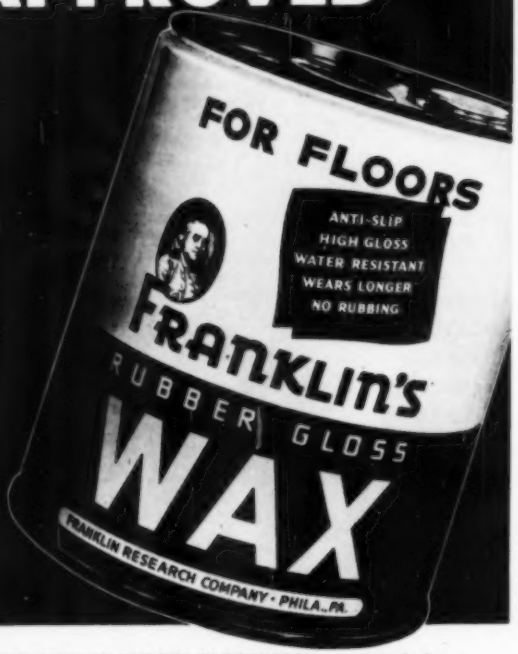

FRANKLIN'S RUBBER GLOSS WAX . . . a tough, long wearing, self-polishing wax. Cuts maintenance costs on linoleum, rubber, asphalt tile, wood, etc. Withstands water and damp moppings indefinitely. Classified by Underwriters' Laboratories as anti-slip.

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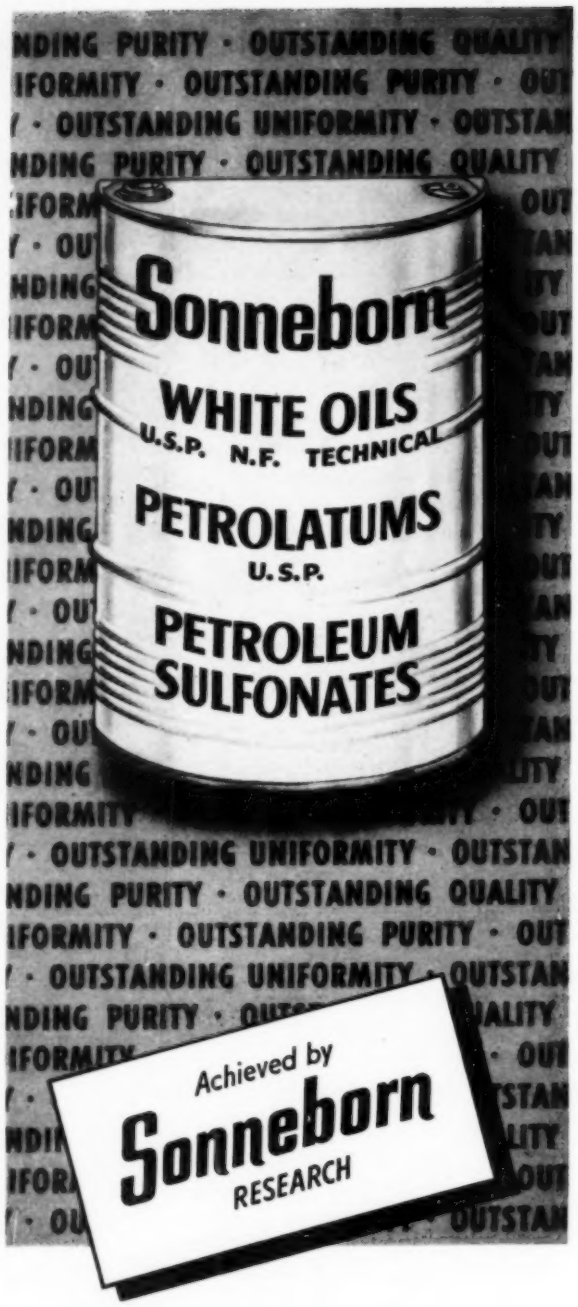

FOR TECHNICAL INFORMATION WRITE:

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Keeling in NPA Post

Appointment of Thomas C. Keeling, Jr., as director of the Chemical Division of National Production Authority was announced recently. Mr. Keeling is on leave from his position as assistant vice-president and sales manager of the chemical division of Koppers Co., Pittsburgh. He has been with Koppers since 1945. Before his recent appointment he served as deputy director of the chemical division of NPA. His previous associations include Niagara Alkali Co., New York, where he served as sales engineer from 1935 to 1941, Mr. Keeling is a former lieutenant colonel.

New Shampoos

(*From Page* 43)

Paul Litkowski, manager, drug and department store sales, in charge.

Seaforth, Inc., New York, presented four new products, "Stavo" spray deodorant, "Daily Double" brushless or lather shave and lotion, "Presto" lather shave and a low-priced "Flash" shave lotion, along with its standard line of men's shaving accessories. Buyers were told of the plans for extensive Christmas season advertising in mass circulation and class publications, and on radio and TV. H. J. Susmuth, assistant sales manager, in charge, assisted by E. G. Casson and R. A. Doran, field representatives.

Hewitt Soap Co., Dayton, O., featured a new box for its famous "Omnibus" toilet soap, now offered at four cakes for a price only slightly increased above that for the former offering of three cakes in the box. By redesigning the package, according to Frank Hermann, sales representative, the package cost was reduced sufficiently to make it possible to add the extra fourth cake as a bonus to the buyer.

Hewitt's "Florette" toilet soaps were available in new window boxes with Christmas colors and designs, while wrappers with Christmas motif were provided as "sleeves" to slip over the company's "Kensington" and other standard soap packages. One new item in the "Our Own" private brand line was a 10-cake assortment of hard milled toilet soap in a reusable polyethylene bag. Another new feature was a 3-drawer reusable gift chest, carrying two bath cakes, four toilet cakes and 12 guest size cakes. Added to the private brand line, Mr. Hermann said, has been a new no-rinse detergent, "Suds" and a new cleaning compound.

The House For Men, Chicago, had new package designs for several of its various masculine toiletries and many of the famous name companies specializing in feminine cosmetics, told of redesigned containers and wraps for the soaps which are included in their varied combinations.

Summary of Lindane Absorbed by Food Samples

Summary of Lindane Absorbed by Food Samples

Food Analyzed	Groups Exposed	Total Days Exposed	Mean Daily Absorption (calculated or observed at vaporization of one gram per 24 hrs.)	Daily Absorption P.P.M. — Average of Means
Milk	1	91	0	0
Potatoes	1	60	.014	.014
Bread	1	98	.35	.35
Cucumbers	1	30	.007	.007
Pie Crust	1	14	1.64	....
	2	49	.50	....
	3	63	.50	.88*
Mushrooms	1	18	.055	.055

* Mean is established at .53 P.P.M.

Lindane . . .

(*From Page* 121)

35 P.P.M.

Cucumbers: Only a single determination was performed on cucumbers. These, placed as single whole specimens in each of the three positions, were exposed for a period of one month. Continued exposure was not attempted because by this time the cucumbers had become rotten. During the month, the lindane was vaporized at an average of 1.468 grams daily. Analyses yielded a single positive finding, that of one part per million of lindane found in the sample at position 3. By calculation this would indicate a daily accumulation rate of .007 P.P.M.

Pie Crust: The next article to be examined was pie crust. This was of especial interest because of its high fat content. A commercially prepared pie crust mix was obtained. This was prepared according to directions, rolled to about 3/16 inch in thickness, cut into one-inch squares and baked. It was then placed in trays upon waxed paper and exposed in the three positions. Three separate series of observations were made upon this food substance, but the last is selected for presentation because of the constancy of the lindane vaporization rate. One gram of lindane vaporization per day was maintained for nine weeks. Samples were analyzed at the fourth, sixth and ninth week of exposure. The amount of lindane accumulated daily by the samples was calculated to be one-half P.P.M.

This food exposure study has shown the extremely low limits of absorption of lindane vapor by various food substances. In evaluating these total amounts as a possible human health hazard, a given group of circumstances may be considered. With due warning as to the additive effect of the chlorinated hydrocarbon insecticides, Dr. O. G. Fitzhugh of the U. S. Food and Drug Administration has stated (4) that 5 milligrams of lindane could be safely ingested by humans, including children old enough to eat fruits and vegetables, for long periods without possibility of injury. Utilizing the twenty-four hour absorption data expressed in the foregoing observation*, a diet of 2225 grams containing 2975 calories in appropriate protein, carbohydrate and fat balance, would contain but .29 of

* Additional data on other types of food exposed to lindane vapor available.

$6.00 PER 100 LB. KEG

F.O.B. New York City

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At last, a low price all-purpose synthetic detergent—*East Coast's H. W. 25 Synthetic Washing Powder*—that works in either hard or soft water. *You* have the benefit of a low priced washing powder that makes rich, creamy suds in all types of water—hard or soft—hot or cold. Packaged in bulk for distribution by jobbers.

Check these advantages in dishwashing:

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2. Extend the use of high-priced vegetable waxes by adding one of the Petrolite family to your formulation. Petrolite waxes are highly compatible, making them ideally suited to use as extenders.
3. Replace costly vegetable waxes completely with Petrolite wax. Many manufacturers have done this, gaining a substantial production cost advantage.
4. Send for samples, technical booklets and price lists. It will pay you to have complete information on Petrolite waxes.

Warehouse stocks of Petrolite wax are carried in Jersey City, New Jersey; Chicago, Illinois; and Los Angeles, California.

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W52/2-2

a milligram of lindane.

Human Exposure Effects

WITH respect to toxic exposures to lindane inhalations in terms of human health hazard, there is a marked lack of clinical evidence. Such few cases as do exist occurred only when lindane vapor was produced from an improperly operating converter. The disability experienced was transitory and was an acute rather than chronic exposure. It consisted mainly of an irritation of the upper respiratory systems and conjunctiva. A very few cases of allergy have likewise been reported.

Industry has cited no instances of illness attributable to lindane exposures. This group includes workers engaged in the manufacture and packing of lindane, as well as office and laboratory personnel. The examination of one small group was directed toward ascertaining disturbances of liver and kidney function as well as possible neurological changes. The conclusions from these various physical examinations was that there was no evidence of toxic effect to the humans exposed. However, no estimation had been made of the concentration of lindane present in the air or of the amount of surface exposure to the chemical. About 60 persons were involved in this exposure study.

Since human experience has yielded little positive information about the toxicity of lindane, evaluation of lindane toxicities must rest upon data obtained from animal experimentation. Some pathological findings resulted from an experiment in which lindane vapor exposure was used.

Sweetman and Spear (5), at the University of Massachusetts, have exposed rats to a continuous atmosphere of Aerovap dispersed lindane vapor. Their exposure level has been calculated to be about one-third of the expressed saturation level, namely .21 micrograms per liter, although over the 655 days of exposure there were some minor variations in this concentration. No variations in growth rate were observed and longevity was not affected. Histological examination of tissues of brain, spleen, liver and kidney, etc., showed no alteration either at 193 days, at 362 days, or at 655 days. These same workers have reported no evident toxicity in young rats under this same atmosphere, several litters having been exposed from birth to maturity.

Thus, if we are looking for alarming evidences of lindane toxicity, we do not find them. There are apparently no chronic pathologies resulting from diets of 50 P.P.M., 1 gram daily applied to the skin (less than 50 mg. per kg. body weight) or from inhalation of .21 micrograms of lindane per liter of air. These are the experiences based on observation of animals.

When lindane is vaporized at the Interdepartmental Committee's selected rate of one gram per day per 15,000 cubic feet in a normally ventilated room, the actual concentration of lindane in the air has been averaged at .017 micrograms per liter. Such a concentration has given satisfactory insect control. Moreover, when considered in terms of possible health hazard, this concentration is forty times less than that concentration which over an extended period of time caused minor histological changes in rat liver and kidney. It would appear that no health hazard is likely when converters are properly operated.

Summary

SOME points of information on the current use status and regulation with reference to lindane converters or vaporizers is also of interest as concluding information. Numerous cities and states have made separate sets of regulations covering operation of these devices. Examples are Chicago, Illinois, Oakland, California, and there are many others. Most of these have been based primarily on the regulations and suggestions of the original rulings set up by the Interdepartmental Committee in Washington, D. C. Some of the independent government regulations have, however, called for certain restrictions such as limiting use in kitchens or in restaurant rooms where foods were being prepared and to some extent, limiting hours of the day when operation was feasible.

In the State of California it is now possible after extensive test work and development on the use of these devices to clear registration for use of the vaporizers in homes based on eight hours operation per day during daylight hours, devices to be located in hallway areas or in portions of the home away from kitchen and dining quarters. This is considered to be an excellent step within the state and one much in favor of progress and development of this method of control.

The federal authorities of the Production and Marketing Administration are now permitting registration of the lindane vaporization technique for use in homes. A new product recently introduced commercially by American Aerovap, Inc. offers this method which is not to be continuous but is applied as follows: Rooms being treated to be closed and unoccupied during treatment, food, etc., to be covered or removed. Room to be ventilated after use and the treatment to be done in two or three hours time rather than the eight hours used in some areas. Maximum dosage of lindane to be 2 grams per 1,500 cubic feet. This is a much higher concentration than continuous treatment requires. The above treatment not to be used more than once every two weeks. Data on effectiveness against insects and of the method and equipment must be provided to obtain registration. There is little doubt that as development and information continue to increase on this method of insect control, its scope and use will be more broadly accepted.

References

(1) Spear, Philip J., Insecticide Vaporizers, Soap and Sanitary Chemicals, August, 1952, page 147.

(2) Tatro, Mahlon C., University of Massachusetts, Master of Science Thesis Unpublished Manuscript.

(3) Schecter, M. S. and Hornstein, I., Anal. Chem. 24: 544-547 (1952) Colorimetric Determination of Benzene Hexachloride.

(4) Testimony of Dr. O. Garth Fitzhugh, Hearings in the Matter of Tolerances for Poisonous or Deleterious Residues on or in Fresh Fruits and Fresh Vegetables. Page 8509, Washington, D. C., Federal Security Agency. Docket No. FDC —57. May 1950.

(5) Sweetman, H. L. and P. J. Spear, University of Massachusetts, Unpublished Manuscript.

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A PURE, ODORLESS SOLVENT

Completely free from objectionable odor and stain, Penn-Drake Insecti-Sol is a 100% volatile solvent which will assist in attaining greatest kill for any insecticide because of its long floating characteristics. Insecti-Sol is highly recommended as a base for all insecticides, and it is particularly outstanding as a solvent for DDT solutions or DDT crystals in low concentrations.

OTHER USES FOR INSECTI-SOL: Floor Sweeping Compounds, Dust Retarders, Mechanics' Hand Cleaners, Shampoo Oils, Compounds for Cleaning Peas . . . and wherever else a kerosene-type product can be used and where the kerosene odor is objectionable.

SPECIFICATIONS

A.P.I. Gravity	49/50.5	Initial Boiling Point	385/395°F
Specific Gravity at 60°F	0.775/0.785	Distillation End Point	465/480°F
Saybolt Viscosity at 100°F	30/31 sec.	Unsulfonatable Residue	98%
Flash Point C.O.C.	170/180°F	Color	Water white
Fire Point C.O.C.	180/190°F	Odor	Practically none

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News

Hartley Joins Remsen

Richard O. Hartley has recently been appointed sales manager for Remsen Chemical Co., Oceanside,

RICHARD O. HARTLEY

N. Y., manufacturer of ANTU and phosphate insecticides. Prior to joining Remsen. Mr. Hartley was with W. A. Cleary Corp., New Brunswick, N. J. Earlier he served in the eastern sales department of the Velsicol Corp., Chicago, and had been a major in the Chemical Warfare Service. He is a graduate of Colgate University.

Hollingshead Ups Severson

Donald O. Severson, vice-president and director of sales and merchandising for R. M. Hollingshead Corp., Camden, N. J., has been elected a member of the firm's executive committee, ex-officio, it was announced recently by Wilbur H. Norton, president.

NSSA Show Sells Out

All available booth space for the trade show to be held in conjunction with the 1953 convention of the National Sanitary Supply Association was sold out by Sept. 23, Leo J. Kelly, executive vice-president has announced. The trade show and 30th annual meeting of the association will be held at the Conrad Hilton Hotel, Chicago, March 22-25, 1953. Assignment of booths to exhibitors was done by drawing lots at a meeting attended by many of the exhibitors in his Chicago office. It was the fastest sell out of show space in the organization's history, Mr. Kelly commented. Twenty-six new members have also been added to the Association's roster, he made known.

Old Empire Relocates

Old Empire Manufacturing Chemists, Inc., recently announced the purchase of buildings at Mount Prospect and Verona Avenues in Newark, N. J., and the removal of all their operations to this new plant. The all-brick buildings have a total of 56,000 square feet of floor space, air-conditioned offices and reception and conference rooms. The buildings cover an area of one block from Verona Avenue to the Erie Railroad tracks and have rail sidings and truck entrances for easier handling of materials. Old Empire was formerly located at 31 Coes Place.

Onyx Has New Cationics

Three new cationic quaternary ammonium compounds were introduced recently by Onyx Oil & Chemical Co., Albany. Their application is said to render textiles bacteria and mildew proof and resistant to body odors. They are being marketed under the trade name "Catex" and are recommended for sanitized finishes, textile deodorizing agents, mildew resistant finishes, and anti-static agents.

Van Winkle to Atlas

Dixon Van Winkle, formerly eastern general manager for Julius Hyman & Co., Denver, has been appointed special sales assistant in the sales division of the industrial chemicals department of Atlas Powder Co., Wilmington, Del., it was announced recently. In his new post Mr. Van Winkle reports directly to George J. King, director of sales. His duties consist of correlating sales efforts in specific fields of sorbitol usage.

Other personnel changes in the industrial chemical department include the appointment of Arthur F. Quinlan as technical sales representative to service customers in northern and western New York. At the same time Maurice A. Ponti has been made technical sales representative. He is assigned to New York sales office and covers part of northern New Jersey.

DIXON VAN WINKLE

Taylor-Reed Buys 'Spandy'

Spandy, Inc., West Orange, N. J., announced recently the sale of their product "Spandy," a household sanitizer and disinfectant, to Taylor-Reed Corp., Glenbrook, Conn. "Spandy" is described as a deodorant and antiseptic disinfectant, and is said to be non-poisonous and non-staining.

Rader in New Post

Appointment of Charles O. Rader as vice-president in charge of sales and advertising was announced recently by Spickelmier Products Co., Chicago, manufacturers and distributors of aerosol products and chemical specialties. Mr. Rader was formerly sales and advertising manager of the Aerosol Division of Bridgeport Brass Co., Bridgeport, Conn., sales promotion manager of the consumer division of Koppers Co., Pittsburgh, and a division sales manager of Lever Brothers Co., New York.

Opens Dallas Office

Simoniz Co., Chicago, recently announced establishment of a district office in Dallas, Tex. Vernon A. Jaubert is southwestern division sales manager.

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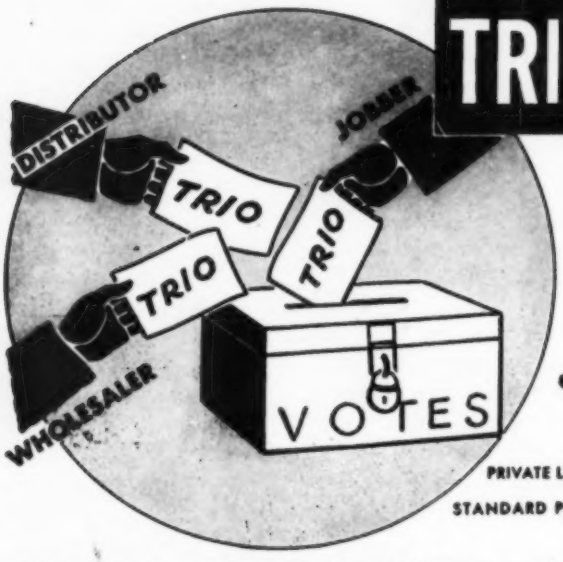

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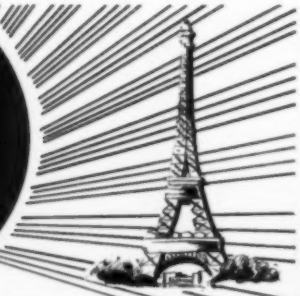

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Chlordane for Household Insecticides

CLARIFICATION of its recommendations for the use of chlordane in household insecticides, formulations for such use having been accepted by the Insecticide Division, Livestock Branch, Production and Marketing Administration, U. S. Dept. of Agriculture, is contained in a letter issued recently by Velsicol Corp., Chicago. The text of the letter follows:

"Chlordane formulations for household use have acceptance of the Insecticide Division, Livestock Branch, Production and Marketing Administration, United States Department of Agriculture. This acceptance was defined and printed as Interpretation 19 of the Regulations for the Enforcement of the Federal Insecticide, Fungicide and Rodenticide Act.

The purpose of the present letter is to clarify our recommendations for the control of insects in the household use of chlordane. It should be clearly recognized that Interpretation 19 applies only to chlordane formulations intended for use in the household and does not apply to any exterior or agricultural use. Consequently, the information herein contained is limited to such household usage.

Formulations of technical chlordane have been available to the public and commonly used as household insecticides since 1946. Chlordane formulations have been found to be unusually effective against certain insect pests of the household.

1. The three most commonly used formulations for the household are petroleum distillate solutions, water emulsions and dry powders.

a) Petroleum distillate solutions.

The most commonly used diluent of this class is deodorized kerosene. Chlordane usually appears as the sole active residual ingredient. Knockdown agents such as pyrethrum may also be present. Formulations containing up to 2.5 per cent chlordane are adequate for household insect control and are accepted by the Production and Marketing Administration of the United States Department of Agriculture. For example, if it is desired to use a combination of DDT and chlordane, then as much as 3 per cent DDT may be used with 2 per cent chlordane. The use of 5 per cent DDT will require the use of only 1.5 per cent of chlordane. Velsicol Corp. recommends at least 1½ per cent chlordane should be used when the formulation includes other residual insecticides in suitable amounts.

b) Water Emulsions.

Chlordane is ordinarily the sole active residual ingredient. Concentrations of chlordane in emulsions parallel those used in petroleum distillate solutions. Combinations of chlordane with knockdown agents or residual insecticides may be used as described for petroleum solutions. Velsicol Corp. recommends at least 1½ per cent chlordane should be used when the formulation includes other residual insecticides in suitable amounts.

c) Dry Powder Formulations.

Chlordane dispersed on dry diluents may contain up to 5 per cent chlordane by weight. Chlordane is usually utilized as the sole active ingredient and is recommended in concentrations above 3 per cent. Velsicol Corp. recommends at least 3 per cent chlordane should be used when the formulation includes other residual insecticides.

2. General Methods of Applying Chlordane Household Formulations.

Liquid formulations should be applied by wet spraying or by brushing. Chlordane formulations need only be applied to the cracks, surface or other areas where the insects have been seen resting, running or hiding. Such type of application is commonly referred to as "spot" treatment and is adequate for control of household pests.

3. Accepted Uses for Chlordane Formulations.

In Household Insect Control.

a) For the Control of Roaches or Waterbugs.

Thoroughly treat infested cracks, baseboards and other hiding places. Apply locally on exposed surfaces where roaches will crawl when they come out of hiding. Repeat treatment when necessary.

b) For the Control of Ants.

Thoroughly treat ant trails and areas around door sills and window frames where the pests may enter the premises. It is frequently desirable to treat the openings around water pipes, heat ducts, electrical outlets and baseboards where ants may come out into rooms from wall spaces and partitions. Repeat treatments as often as necessary to maintain effective control.

c) For the Control of Silverfish.

Thoroughly treat baseboards, areas behind shelving, bookcases and storage areas and any other infested cracks or hiding places. Also apply locally on exposed surfaces where silverfish will crawl when they come out of hiding. Repeat treatment sides of carpets. Repeat treatment when necessary.

d) For the Control of Carpet beetles.

Apply to area of the floor, baseboards, and closet shelves and work the material into cracks where the insects may be found. Treat underwhen necessary.

e) For the Control of Brown Dog Ticks in premises.

Thoroughly treat infested cracks and other hiding or resting places such as around baseboards, window and door frames, wall cracks, sleeping quarters of household pets and local areas on floors and floor coverings. Fresh bedding should be placed in animal quarters following treatment. Do not treat pets or other animals.

f) For the Control of Spiders in dwelling.

Apply as wet spray along infested baseboards and corners. In basements, treat pipes, storage localities, and other areas infested.

For reducing fly population that may enter the dwelling, apply by brushing or as coarse, wet spray to selected outside portions of residence such as around windows, doors and screens. Apply to walls and ceilings of porches and in out buildings.

For reducing mosquito population that may enter the dwelling, apply by brushing or as coarse, wet spray to selected outside portions of residence such as around windows, doors and screens. Apply to walls and ceilings

Lien Chemical Co., Franklin Park, Ill., recently completed the new 15,000 square foot warehouse addition to its plant (shown above). The most modern methods of materials handling have been installed under the direction of C. J. Tietema, Lien's production manager. Noel O'Reilly, formerly with Lee and Cady Co., wholesale grocers of Toledo, has been employed as warehouse manager. The addition is necessitated by the rapid expansion of the company's business.

Meet all Sanitary Requirements

. . . with these Three Bactericides and Sanitizers. They have been manufactured to comply with the varying Health Department standards thru-out the States.

Increase Sales and Repeat Orders

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KRYSTYL-T An odorless and tasteless Chloramine-T compound. Active bactericide, germicide, deodorizer and disinfectant. Non-irritating to the hands.

KRYSTYL-EEN A Quaternary Ammonium Sanitizer. Odorless and Tasteless.

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A Chlorinated Bactericide.

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J. C. PAUL & CO.
8140 N. Ridgeway Ave. Skokie, Ill.

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"This Job is a Cinch with HAVILAND Floor Squeegees"

Floor cleaning jobs are quicker, easier with HAVILAND floor squeegees. HAVILAND squeegees promote the sale of waxes and soaps, because they help remove the dirt and grime that often spoils good work. Order today. See for yourself how HAVILAND squeegees dry floors faster. Write for free catalog showing *complete* line of squeegees for every type floor. Ask about HAVILAND window squeegees, too.

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"Better Products at Competing Prices"

STATEMENT OF OWNERSHIP

Statement required by the Act of August 24, 1912, as amended by the acts of March 3, 1933, and July 2, 1946 (Title 39, United States Code, Section 233) showing the ownership, management, and circulation of Soap & Sanitary Chemicals, published monthly at New York, N. Y., for October 1, 1952.

1. The names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Mac Nair-Dorland Co., Inc., 254 West 31st St., New York 1, N. Y.; Editor, Frank J. Reilly, 254 West 31st St., New York 1, N. Y.; Managing Editor, Ira P. MacNair, 254 West 31st St., New York 1, N. Y.; Business Manager, Thomas Morgan, 254 West 31st St., New York 1, N. Y.

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.)

Mac Nair-Dorland Co., Inc., 254 West 31st St., New York 1, N. Y.; Ira P. MacNair, 254 West 31st St., New York 1, N. Y.; Grant A. Dorland, Russell Cave Pike, Lexington, Ky.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required from daily, weekly, semiweekly, and triweekly newspapers only.) .....

signed IRA P. MAC NAIR, Publisher

Sworn to and subscribed before me this 3rd day of September, 1952.

(SEAL) HARRIET LEVINE

(My commission expires March 30, 1954.)

of porches and in out buildings.

The Federal Insecticide, Fungicide and Rodenticide Act requires an ingredient statement and a caution statement for all insecticides. Proper statements for chlordane formulations will be supplied.

The information presented above may be used as a guide in preparing chlordane formulation labels for registration."

Buys Innis-Speiden

Innis, Speiden & Co., New York, has been bought by Berkshire Chemicals, Inc., New York, according to a recent announcement by Malcolm H. McAllister, president of Berkshire. The purchase was made from International Minerals & Chemical Corp., Chicago, which has owned and operated Innis, Speiden as a division since July 1951. The transaction includes name, assets, and good-will of the chemical distribution setup of Innis, Speiden. The gum, wax, and insecticide departments of the firm were recently sold to other interests, and will no longer be associated with the Innis, Speiden name. The chemical business of the 136-year-old firm continues from its Liberty street address, with Berkshire taking over the management and adding to the service facilities. The following officers have been elected: M. H. McAllister, president; M. D. Sanders, vice-president; M. H. Quartz, treasurer; H. A. Withey, secretary; and R. N. Widdall, assistant secretary. On the board of directors are Messrs. McAllister, Sanders, Quartz, Withey, and Romer.

Names Canadian Distributor

Bobrick Manufacturing Corp., Los Angeles, recently announced appointment of Wynant & Co., Ltd., as their new exclusive representative in Canada. Wynant, with headquarters in Montreal, maintains additional offices and warehouses in Toronto, Calgary, and Vancouver. Wynant will handle sales, warehousing and service for Bobrick soap dispensers throughout Canada.

According to William S. Louchheim, Bobrick president, the firm has sold dispensers in Canada for many years, but it is hoped that the new arrangement will result in improved service to Canadian jobbers and dealers.

Julius M. Dulin Dies

Julius M. Dulin, chairman of the board of directors of the Brulin Co., Indianapolis, died October 10 at his home of a heart attack. Mr. Dulin was one of the founders of Brulin Co., and had served as an official since its beginning. He is survived by his wife, Gwynne, and by his son, James, of Indianapolis, and his mother, Mrs. J. L. Dulin of Noblesville, Ind.

Geraci Joins Gallowhur

Gallowhur Chemical Co., New York, recently announced appointment of John Geraci as plant manager at Ossining, N. Y. Mr. Geraci was formerly assistant technical director of Sterone Corp. Gallowhur Chemical Co. manufactures "Puratized" mercurial compounds and "Purasan" quaternary germicides.

Woodward to Hollingshead

J. W. Woodward has been appointed west coast representative for R. M. Hollingshead Corp., Camden, N. J., according to a recent announcement by Fred H. Lee, Jr., manager of the industrial division. Mr. Woodward resigned as a research engineer with North American Aviation to join Hollingshead. In his new position he represents the firm's industrial and government divisions on the west coast.

New home of J. C. Paul & Co., Skokie, Ill., manufacturers of "Burnishine" metal polish and other chemical specialties. The new building was occupied by the company when it moved from the original site in Chicago, where Paul had been located since 1887.

Robert S. and Ernst H. Killian, partners of the company and grandsons of the founder, J. C. Paul, have added several new items to the line, including "Krystyl-T" and other sanitizing compounds.

He replaces J. W. Reed Jr., who has been reassigned to the Camden headquarters and advanced to assistant manager of the government sales division.

More German Montan

Lechchemie, Gersthofen near Augsburg, Germany, is stepping up exportable production of "Gersthofen Waxes" to at least 100 tons a month, according to a recent statement by Dr. Guido van Rosenberg, chief chemist. Dr. Rosenberg is currently visiting American consumers of these modified montan waxes, which can replace carnauba in liquid and paste polishes, and other chemical specialties.

Seaton in New Post

Dr. Max Y. Seaton has been named senior vice-president and technical co-ordinator of the chemical divisions of Food Machinery and Chemical Corp., New York. Paul L. Davies, president, announced recently. FMC Chemical Divisions include Westvaco Chemical Division, Niagara Chemical Division, Ohio-Apex Division, and Buffalo Electrochemical Co.

Formerly executive vice-president of Westvaco, Dr. Seaton has his office in the Chrysler Building East, New York, where the newly created eastern administrative headquarters of all FMC chemical operations are located.

The position of executive vice-president of Westvaco has been discontinued and William B. Thom, president of Westvaco, and William N. Williams, operating vice-president of Westvaco, assume responsibility for the former activities of this office.

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Revive Labeling Committee

Uniform labeling of chemical products is the object of reactivation of a Public Health Service committee which will cooperate with the Manufacturing Chemists Association, it was announced recently by Federal Security Agency. In 1930 agreements were drawn up between certain chemical manufacturers and PBS. According to Dr. Leonard A. Scheele, surgeon general of the Public Health Service, the use of potentially hazardous chemicals has greatly increased and many new products not covered by the agreements have been introduced. This necessitates new steps to meet new problems. Agreements with manufacturers of methanol, carbon tetrachloride and other hazardous chemicals are therefore being discontinued.

The agency endorses the principles of labeling set forth in part I, manual L-1, "Warning Labels," published by the Manufacturing Chemists Association. According to Dr. Scheele State regulatory agencies have been looking to MCA and the Public Health Service for development of guides to satisfactory uniform labeling. It is hoped that reactivation of the advisory committee will provide necessary safeguards. The labeling program has been developed for bulk packages of chemicals intended for commercial use, and does not affect the provisions of the Federal Caustic Poison Act or the Federal Food, Drug, and Cosmetic Act.

The Chemical Specialties Manufacturers Assn. is cooperating in this work as it affects household chemical products.

New Aerosol Deodorizer

A new aerosol deodorizer named "Spring Blossom" was introduced recently by Tru-Pine Co., Chicago. One can of the product, which contains triethylene glycol, is said to suffice for treatment of 75 average rooms. Samples of the "Sprayway Spring Blossom" deodorizer are available upon request.

Allethrin Digest

A digest of information on allethrin by R. C. Roark was published recently by the division of insecticide investigations, Bureau of Entomology and Plant Quarantine, U.S. Department of Agriculture. The 58-page publication presents information on chemistry, economic status, and toxicology of allethrin. There is an extensive classification of insects against which allethrin has been tested, and a full list of literature references.

Report Aerosol Accidents

The safety and accidents subcommittee of the aerosol scientific committee of Chemical Specialties Manufacturers Association is requesting all members interested in aerosol packaging to report all aerosol accidents involving consumers, whether damage claims are involved or not. The association is sending report forms to its members. The information contained in the reports will be confidential. In addition it requests reports on accidents having occurred since 1947. The data thus collected are expected to help in eliminating aerosol accidents and uninformed criticism.

McLaughlin Speaks to CSMA

William H. McLaughlin, director of sanitation for Lily-Tulip Cup Corp., New York, was the speaker at a luncheon meeting of Chemical Specialties Manufacturers Association, held September 17 at Hotel Roosevelt, New York. His talk outlined what the industrial sanitation man expects of specialists. It was followed by a question and answer period.

Vincent Russo (below) formerly production manager of the Huntsville, Ala., chemical plant of John Powell & Co., New York, was recently appointed general manager of the new Powell plant in Atlanta for the production of DDT, toxaphene and benzene hexachloride concentrates.

Canco Forms New Division

American Can Co., New York, recently announced establishment of a new packing and materials handling division, which consolidates the materials handling, packing, and shipping functions of the general manufacturing department.

Appointment of S. S. Nicholson as supervisor of the new division was announced at the same time.

Elected to Berkeley Board

Charles R. Brinkerhoff, secretary, Millmaster Chemical Corp., New York, was recently elected a director of Berkeley Chemical Corp., Berkeley Heights, N. J.

Sees Allethrin Price Cut

In 1950, when Carbide & Carbon Corp. at Charleston, W. Va., first produced allethrin on a commercial scale it was priced at $55 per pound (100 percent active material). Later U. S. Industrial Chemicals, Inc., and Benzol Products Co. announced they would produce allethrin. Since then there have been several price reductions, and recently the material went down to $32 per pound. A prediction that the price of allethrin would be cut was made recently by the U. S. Department of Agriculture.

In the spring of 1951 the government authorized rapid tax amortization certificates for new allethrin plants to be built by Carbide and Carbon and by U.S.I. The U.S.I. plant is expected to come into production within a few weeks, and will have an annual capacity of 100,000 pounds. The Carbide plant will not be ready until 1954, and will have an annual capacity of 400,000 pounds. Benzol Products recently announced that it had increased its annual production capacity from 20,000 pounds to 160,000 pounds.

The military recently bought five million 12-ounce aerosol bombs. The Bureau of Animal Industry of USDA has approved the use of allethrin in meat packing plants.

USDA's entomologists report that they have found no evidence that insects acquire immunity against allethrin or pyrethrum.

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FTC Cites Nash & Kinsella

Nash & Kinsella Laboratories, Inc., St. Louis, were charged with misrepresenting the effectiveness of an insecticide preparation, and Wesley K. Nash, Charles W. Taylor, and Maxine B. Nash, officers of the corporation were cited as respondents in a complaint issued recently by Federal Trade Commission.

The complaint alleges that the respondents' advertisements have represented falsely that "2-Way Roach and Insect Spray," when used as directed, will kill or control insects normally found around food or feeds without rendering such food or feeds unfit for consumption, will control lice or mites on poultry and can be wiped on the hair of dogs, cats or other animals in a sufficient amount to kill or repel lice, fleas, gnats or biting flies without being injurious to such animals; will kill fleas when sprayed into the air, will when sprayed on doorways, screen doors, light bulbs, and other surfaces, kill or repel insects that gather there at night under the light or that walk on such sprayed surfaces; will kill termites either inside or outside of buildings and is of practical value in the control of termites; is absolutely harmless and nonpoisonous and can be used to kill insects around or infesting food without rendering such food unfit for consumption and that children suffer no harm from it; is 28 times more effective against all insects than 25 per cent D.D.T.; in a quart container contains 66 times more insecticide than the ordinary aerosol bomb; is effective in killing flies or insects within a 25,000 cu. ft. area when the amount expelled by a few strokes of the hydraulic sprayer is sprayed into an electric fan.

The respondents have 20 days to answer the complaint. A hearing was to be held in Washington, October 22, before hearing examiner James A. Purcell.

Wax Importers Elect

American Wax Importers and Refiners Association recently held its fifth annual meeting. Rudolph E. Sievert, Frank B. Ross Co., was elected president and Charles Christman, Smith & Nichols, Inc., chosen vice-president. In addition the following become directors for the ensuing year: J. L. de Lyra, Wessel, Duval & Co.; L. M. Argueso, Sr., M. Argueso & Co.; B. W. Young, Wax & Rosin Products; John J. Garvey, Mamaroneck Chemical Corp., becomes secretary and Edward Hess of F. W. Steadman Co. becomes treasurer.

Photograph below was taken during the recent annual golf outing for the salesmen and suppliers of F. W. Hoffman Co., Philadelphia. Mr. Hoffman, wearing dark trousers and sport shoes, is in front row. To his right are Martin Peters of Moore Brothers Co., New York, president of National Sanitary Supply Assn., and Jay Zucker of Chemical Supply Co., Cleveland.

Navy Bacteriological Lab

Establishment of a new bacteriological laboratory by the Navy Bureau of Ships with Dr. R. L. Stedman in charge was announced recently. The new laboratory is located in building 720, Development Division, Industrial Testing Laboratories, Philadelphia Navy Base, Philadelphia. Dr. H. G. Lederer of R. M. Hollingshead Corp., Camden, N. J., and chairman of the Disinfectant and Sanitizers Division, Chemical Specialties Manufacturing Association has been asked to make recommendations concerning the equipping and layout of the new laboratory.

Penick Names Velsor

S. B. Penick & Co., New York, recently announced election of Joseph A. Velsor as vice-president. Mr. Velsor was president and general manager of Peek & Velsor since 1923.

Monsanto Builds New HQ

Monsanto Chemical Co., St. Louis, recently announced authorization of the construction of a new headquarters office building in St. Louis County. The initial building, which is expected to be completed within two years, will be eight stories high and will provide about 350,000 square feet. No manufacturing operations will be conducted at the county site.

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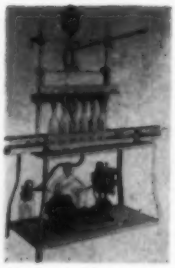

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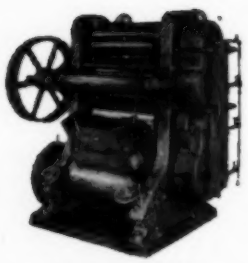

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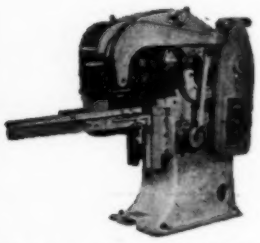

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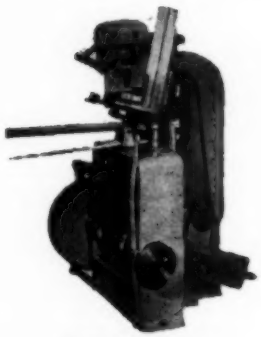

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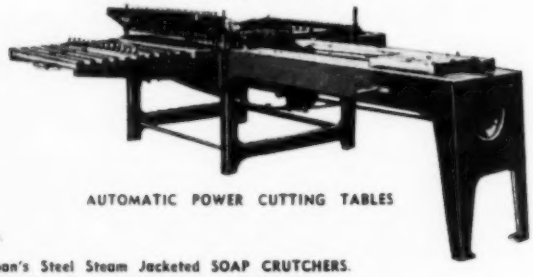

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Soapmaker: All - around soap maker wanted. Give full details first letter. Factory located Pacific Coast. Address Box 624, c/o *Soap*.

Chemist: Manufacturer needs services of chemist to undertake research project in resins, polimers, etc., in floor products. Experienced researcher with background in field. Will consider younger man also for training in project. Send full details, education, experience, etc. Held fully confidential. Address Box 625, c/o *Soap*.

Salesmen Wanted: Exclusive territory. If you are a cleaning material or sanitary chemical salesman working on a commission basis and wish to double your income, here is your opportunity. We have developed and perfected a device for painting wire fences, window guards, bar fences and inside screening that works like a charm. The device is completely covered by patents. It is absolutely guaranteed to do a perfect inexpensive job. 200 of the largest companies in the Chicago district are using it and are very pleased. Write direct to Meinhardt Cleaning Materials Co., 2314 W. Van Buren St., Chicago 12, Illinois, for full particulars. Give us your full history in the first letter, that will save time. All information will be held in full confidence and no check up will be made on your present employer. Look around and see the number of fences that need painting. It will astound you.

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Positions Open

Assistant Wanted: Capable assistant to general manager of a petrochemical plant producing a limited number of special chemicals, also sulfonates for detergent manufacturers. Unusual opportunity for advancement. Give age, education and past employment record with references. Address Box 626, c/o *Soap*.

Men: We have openings for research & development men in our Camden, N. J. laboratories. We require men experienced in formulating water emulsion type floor waxes, furniture & automotive polishes & cleaners. Require men with experience in formulating rust preventive compounds, oils, lubricants etc. Experienced with Government specifications desirable. These positions offer excellent opportunities for men with qualifying experience. Give full details as to age, education, experience & salary requirements to—R. M. Hollingshead Corp., Personnel Office, 840 Cooper St., Camden 2, New Jersey.

Positions Open

Chemist: Soap chemist wanted with experience in vegetable oil foots. Address Box 627, c/o *Soap*.

Salesman: First Class Salesman wanted to sell detergents and soap to industrial users in the East—textiles, washing compounds, shampoos, rug shampoos, etc. State previous experience and connections, present salary and salary wanted. Submit complete details in confidence and picture, that will be returned. Address Box 628, c/o *Soap*.

Gen. Mgr. Petrochemical Plant: Rare opportunity for top executive with solid background of experience in business management. Position entails complete management of our California plant. Starting salary will be governed by ability, with opportunity to increase materially your present income. Future income unlimited. Write now for personal interview. State age, education, managerial qualifications, past experience and references. Correspondence confidential. Address Danciger Bros., Danciger Bldg., Fort Worth, Texas.

Salesman Wanted: Manufacturer of fine toilet soaps has good opportunity open for man with department store and drug store connections. Private label, fancy gift and novelty numbers. Address Box 629, c/o *Soap*.

Sales Representative: Experienced in selling floor waxes, floor seals, disinfectants, insecticides, and janitorial supplies. We have territories open on Pacific coast, in San Francisco, Los Angeles, Seattle, and Portland. Old established firm in business for over half century. Applicant must be experienced and have outstanding sales abilities, not over 45. Address Box 630, c/o *Soap*.

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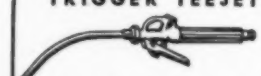

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LONDON PARIS

Positions Open

Wanted: Man with broad chemical and soap manufacturing experience for medium-sized long-established Pacific coast plant, for key production position. Give all details, age, and references. Address Box 631, c/o *Soap*.

Salesman Wanted: For Sanitary Chemicals to sell directly to institutions in territories of California, Arizona, or Nevada. Car necessary. To top producer — salary, plus percentage plus expenses. Manufacturer established 1927. Troy Industrial Products, 2249 East 38th St., Los Angeles 58, Cal.

Situations Wanted

Sales: Representative on Pacific Coast to cover complete insecticide industry, also chemical, drug, and allied groups. Man with 20 years successful sales experience in mid-west, southwest and west coast, open for connection with manufacturer. Knows trade, products, buyers. Can produce business. For further details, write to Box 632, c/o *Soap*.

Chemist Available: Ph.D. with 3 years' experience directing insecticide laboratory, 3 years plant manager large insecticide plant, 13 years' chemical experience on detergents, emulsifiers, pilot plant and commercial scale chemical production. Successful record established in chemical technology, personnel relationship, research direction, and production methods. Address Box 633, c/o *Soap*.

Chemist, Industrial: Competent in sanitary automotive chemicals, adhesives, polishes, protective coatings. Desires part-time work consultant basis—New York. Address Box 634, c/o *Soap*.

Manufacturing Chemist: Plant Manager Experienced in formulation and production of floor waxes, polishes, disinfectants and other household and industrial sanitary chemical specialties; desires connection with progressive firm. Will relocate. Address Box 635, c/o *Soap*.

Miscellaneous

Wanted: Proctor & Schwartz 2 section or 5 section—3 flight automatic soap chip dryer with 2 roll set of crushing and cooling rolls. State age, condition and price. Address Box 636, c/o *Soap*.

Wanted: Private label or packaging work from Central Ohio firms. Facilities for mixing and packaging free flowing dry materials. Will subcontract on government contracts. Strictly confidential dealings. Ohio Laboratories, Inc., 949 West 3rd Ave., Columbus, Ohio.

Pilot Plant Facilities: Available with services of well known Ph.D. Liquid compounding, blending and colloidal emulsifying. Consultation in de-emulsification problems, technical assistance and expert advice on improving or developing of new formulas. All dealings confidential. Center Long Island City, excellent distributing point. Address Box 637, c/o *Soap*.

Will purchase Immediately: Pneumatic Packaging Machine, used for chips, powder, cleanser; also dry mixers, chip dryers, crutchers, and automatic soap press. Address Box 638, c/o *Soap*.

Miscellaneous

Fatty Acids: Several excellent territories open for manufacturers' representatives having contacts in fatty acid or related markets. Good products, unusual opportunity. Address Box 640, c/o *Soap*.

Wanted: Complete soap or sanitary chemical plants. Also individual items such as crutchers, plodders, mills, mixers, presses, dryers, filling equipment, etc. R. Gelb & Sons, Inc., State Highway No. 29, Union, N. J.

Wanted: A good used Viscolizer or homogenizer. Give size, make, price and condition. Address Box 639, c/o *Soap*.

Wanted: Kettles, frames, pulverizers, cooling rolls, chip dryers, plodders, cutting tables, evaporators, packaging units. Will consider idle or operating plant. P. O. Box 1351, Church St. Sta., New York 8, N. Y.

Soap Plant Wanted: We are now manufacturing over $20,000,000 in various lines and wish to expand by acquisition of assets or stock of one or more industrial companies. In our negotiations the seller's problems and wishes will receive full consideration. Present personnel will normally be retained. Address all replies "confidential" C. J. Gale, Sec., 233 Broadway, New York 7, N. Y. BA 7-1819.

For Sale

For Sale: 1500 & 3000# soap crutchers; wrapper type S; P & S rolls; 3 & 5 roll mills; 10" plodder; Pdr. mixers; Fillers; Dryer: Boilers: other items. I. E. Newman, 5602 Blackstone Ave., Chicago, Ill.

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B. P. Jumbo-type 3500 gal. Steam Jacketed Double Arm Mixers.
R. A. Jones Model E automatic Soap Press.
Day and Robinson 800, 1500, 2000 lbs. Powder Mixers.
Day 20" x 39", Allis Chalmers, Great Western Sifters.
National and Lehman 3 and 5 Roll Mills; steel-granite-porcelain.
Stokes and Smith G1, G2, G6, HG84 and HG88 Powder Fillers.
Filler 4-Head Stainless Steel automatic Piston Fillers.
Pony ML and M Labelrites, Ermold and World semi-automatic and automatic Rotary and Straightaway Labelers.
Standard Knapp 429 Carton Sealers; Jones, Ceco Carton Sealers.
Hudson Sharp Campbell auto. collophane Wrapper.
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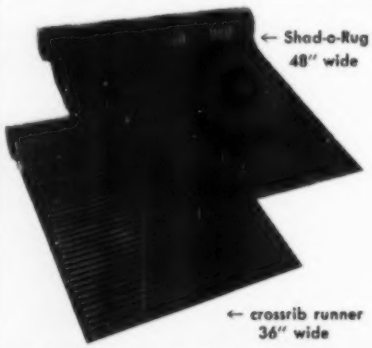

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For Sale: 1—Lehmann 12″ Plodder; 1—Houchin 14″x36″ 5-roll inclined watercooled mill, 30 H.P. motor; 1—Baker 20″x33″ 5-roll mill, 55 H.P. motor; 1—Jones A, automatic horizontal soap press; 1—Jones automatic "K" press; 2—Package Machinery Co. model N soap wrappers; 3—Steel vertical jacketed soap crutchers, 2000 lb. and 1000 lb.; 1—6 knife soap chipper, m.d.; 1—4′x8′ steel flaking or cooling roll; 1—Groen 300 gal. stainless jacketed kettle, 100 lb. w.p.; 1—Houchin No. 4 para block press; 1—Pneumatic Scale Packaging Line. Filter presses 12″ to 42″, powder fillers; powder, paste and liquid mixers; Rotex screens; Hammer mills; soap frames; Dopp jacketed kettles 100, 350, 600 gallon; Blackmer pumps; tanks; carton gluersealers. Ask us to quote on your requirements. Tell us what idle machines or plants you have for sale. Consolidated Products Co., Inc., 15-21 Park Row, New York 38, N. Y. Phone BArclay 7-0600. Inspect our stock at our warehouse, 331-341 Doremus Ave., Newark, N. J.

For Sale: Sacrifice — Several tons sodium carboxymethyl-cellulose, 98 per cent active content in original containers, viscosity types suitable for detergents. Contact Processed Seeds, Inc., Midland, Michigan.

For Sale: 20-bbl. soap crutcher; 600# jacketed horizontal ribbon mixer; 50# to 2000# horizontal ribbon powder mixers. Broughton 50 cu. ft. double arm powder mixer. Steam jacketed steel mixing kettles. Stainless steel steam jacketed kettles. Stainless steel tanks up to 16,000 gal. Shriver 30″ cast iron filter press, 35 plates, center feed, open delivery. Perry Equipment Corp., 1410 N. 6th St., Phila. 22, Pa.

For Sale: Proctor & Schwartz 6-fan automatic soap chip dryer, 2-roll chilling unit, large roll 48″ dia. Empire State foot presses. Soap frames. Allbright-Nell 4′ x 9′ chilling rolls. Blanchard #14 soap powder mill. Lehmann 4-roll W. C. 12″ x 36″ steel mill. Houchin 8½″ x 16″ 3-roll and 18″ x 30″ 4-roll Granite stone mills. Kettles and tanks, iron, copper, aluminum and stainless. Dryers vac. & atmo. Jones automatic soap presses. Slabbers and cutting tables, hand & power. Crutchers. Six-knife chipper. Filter presses 12″ to 42″. Wrapping & sealing machines. Power, paste & liquid mixers. Rotex sifters. Filling machines. Grinders. Hammer mills. Colloid mills, three-roll steel mills 8″ x 22″ to 16″ x 40″ Portable elec. agitators, pumps, etc. Send for bulletin. We buy your surplus equipment. Stein Equipment Co., 107—8th St., Bklyn., 15, N. Y. STerling 8-9066.

Coming Meetings

American Association of Economic Entomologists, annual meeting, Bellevue-Stratford Hotel, Philadelphia, December 15-18, 1952.

AAEE Eastern Branch, twenty-fourth annual meeting, Lord Baltimore Hotel, Baltimore, Md., November 24, 25, 1952.

AAEE Southwestern Branch, Hotel Galvez, Galveston, Tex., February 26, 27, 1953.

AAEE North Central States Branch, St. Louis, March 19, 20, 1953.

Association of American Soap & Glycerine Producers, Waldorf-Astoria Hotel, New York, January 26, 27, 28, 1953.

California Pest Control Operators, conference, California Polytechnic Institute, San Francisco, December 15, 16, 17, 1952.

Canadian Pest Control Operators, 11th annual conference, Ontario Agricultural College, Guelph, Canada, May 11, 12, 13, 1953.

Chemical Specialties Manufacturers Association, annual meeting, Hotel New Yorker, New York, December 7, 8, 9, 1952.

Eastern Pest Control Operators, 13th annual conference, University of Massachusetts, Amherst, Mass., February 5, 6, 7, 1953.

Manufacturing Chemists Association, semi-annual meeting and winter conference, Statler Hotel, New York, November 25.

National Sanitary Supply Association, annual exhibit and convention, Conrad Hilton Hotel, Chicago, March 22-25, 1953.

New Jersey Annual Short Course, Trenton, January 19, 20, 21, 1953.

Ohio Pest Control Operators Association, annual meeting, Cincinnati, December 4, 5, 1952.

Pennsylvania Annual Short Course, Pennsylvania State College, March 3, 4, 5, 1953.

Plant Maintenance Conference and Show, Public Auditorium, Cleveland, January 19-23, 1953.

Purdue Pest Control Operators, 17th annual conference, Purdue University, Lafayette, Ind., January 26-30, 1953.

Salesmens' Association of the American Chemical Industry, annual Christmas party, Waldorf-Astoria Hotel, New York, December 10, 1952.

Society of Cosmetic Chemists, semi-annual meeting, Biltmore Hotel, New York, December 11.

Southern Pest Control Operators, 13th annual conference, Louisiana State University, Baton Rouge, La., February 2, 3, 4, 1953.

Toilet Goods Association, annual convention, Waldorf-Astoria Hotel, New York, May 12, 13, 14, 1953.

Nathan to Atlantic

Ernest Nathan and Henry Papini, former executives of Warwick Chemical Co. and Sun Chemical Corp., Long Island City, N. Y., recently joined Hugh Bonino and Joseph Buonanno in management and ownership of Atlantic Chemical Co., Centredale, R. I., it was announced recently.

Mr. Nathan, founder of Warwick Chemical Co. in 1930, and who resigned recently as vice-president and chairman of the chemicals group of Sun Chemical Corp., is chairman of the board of Atlantic. Mr. Papini, who was North and South Carolina sales manager of Warwick, is a vice-president of Atlantic.

Gunter Joins Hercules

Allen C. Gunter, former state entomologist with the Texas Extension Service, recently joined the agricultural chemicals section of Hercules Powder Co., Wilmington, Del. He is making his headquarters at the company's Dallas office, where he will be concerned principally with the uses of toxaphene insecticides on cotton and other crops produced in the area.

Brown-Allen Names Agent

Brown-Allen Chemicals, Inc., New York recently announced appointment of John H. Calo & Co., New York, as sales agent for their oil and chemical products in the metropolitan New York area.

F. H. Haggerson Dies

Fred H. Haggerson, chairman of the board of Union Carbide & Carbon Corp., New York, died recently at the Roosevelt Hospital, New York, after a brief illness. Mr. Haggerson, who was 68, had been with Union Carbide for over 33 years. He became a vice-president in 1938, a director in 1941, president and a member of the executive committee in 1944, and chairman of the board in 1951.

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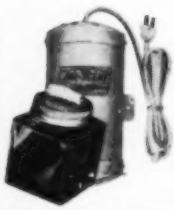

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- Acquaintance with surfactants
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c/o Soap & Sanitary Chemicals
254 West 31st Street New York 1, N. Y.

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An Inquiry Is Indeed Welcome and Involves No Obligation.

Tale Ends

GUM-SHOE and grapevine stuff! Come next spring and Lever will be on deck with still another version of "Lifebuoy" soap, this one to contain a new and reputedly very effective bacteriostatic compound. The new "Lifebuoy" will be launched in time for the big summer B.O. market. Also, quietly and devoid of fanfare, Colgate is testing out a new all-synthetic toilet bar yclept "Charmis." Isn't this a name which C-P-P used in former years for one of its regular toilet soaps? We seem to remember that it is. Anyway, reports have it that "Charmis" has gone synthetic.

* * *

In a real good article on luxury soaps in a recent issue of the N.Y. World-Telegram and Sun, *Hope Johnson came up with a statement which for sheer originality should be awarded the soap industry's gold plated door-knob for* 1952. *Stated Hope: "Soap has come a long, long way since great grandmother collected fat drippings on the back of the kitchen stove, boiled them with potash in an iron kettle in the back yard, then cut the hardened product into simple slabs."*

* * *

Dishwashing need not be disagreeable says a booklet issued by the Bureau of Human Nutrition and Home Economics, USDA, — and given a kicking around in the recent political campaign. Not if you have the right equipment which is revealed to be a dishpan, — a dishpan large enough to hold your dishes, but which will also fit in your sink, — if you have a sink. The booklet goes on to say that there are round dishpans, oval dishpans, and oblong dishpans. These it seems, are designed for round sinks, oval sinks, and oblong sinks, or vice versa. For further breath-taking enlightenment, send a dime to the Supt. of Documents, Washington, for "Tools of Food Preparation and Dishwashing."

* * *

Insecticides, probably mostly DDT, used to fight hordes of locusts in the Middle East and elsewhere in recent years, are in a manner of speaking interfering with the dietary habits of the natives. It seems that locusts' legs long have been a delicacy throughout Iraq, Iran, et al, and were sold freely in the bazaars and elseyhere. But, on account of DDT, etc. used to kill the insects, health officials have warned the populace to lay off. Maybe the Delaney Committee should send an emissary to Iraq right quick to dig up further "expert testimony."

* * *

Soap chemist shipwrecked and catapaulted into the newspaper headlines! Vernon Haag of well-known Haag Laboratories, Inc., Blue Island, Ill. soap manufacturers, was aboard his 38-foot cabin cruiser on Lake Michigan when it was wrecked on the Chicago lakefront recently. While making emergency repairs to his steering gear, the cruiser was driven ashore by a heavy gale. Mr. Haag sent up several flares, but had to jump for his life as the boat was swept against a seawall and swamped. He was rescued unharmed by the Coast Guard, but his $20,000 cruiser was a total loss.

* * *

The big ballyhoo which has accompanied the marketing of chlorophyll tooth pastes apparently has brought a sharp rise in the use of all dentifrices. More people are using more tooth paste! Dentifrice buying habits have been changed radically during the past ten months, over-all sales having gone up some 26% *while chlorophyll products now account for one-third of the total market. Ah, ballyhoo, — the miracles which you perform are wondrous!*

* * *

In a real hurly-burly free-for-all on the Columbia University campus in N.Y. during the late lamented political campaign, two groups of students clashed. The chief weapons used were cakes of soap. A group, with banners "Detergents for Democrats," marched across the campus carrying mops, brooms and soap, and ran head-on into a mob of Stevenson supporters. The latter objected to the attempt to use detergents on Democrats as the signs so proudly proclaimed. They attacked, — and the fight was on. The Eisenhower boys responded by throwing anything handy which happened to be soap. And that, gentle reader, is what happened to "Detergents for Democrats."

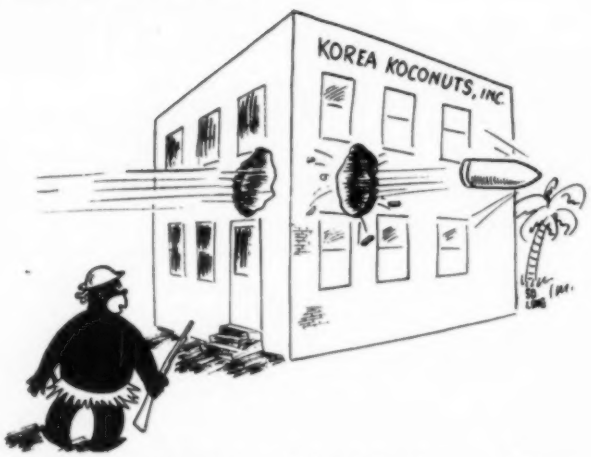
* * *

At the 39th annual meeting of the Chemical Specialties Manufacturers Assn. to be held in N.Y. Dec. 8 and 9, something like 30 firms will hold "open house" on the same night. Custom dictates that members attempt to visit each "open house" suite and partake of refreshment. Records reveal that no one ever has completed the full course, but there are always a few who make a try at it. Some 600 will attend, and the object of the open house night is to "mix-up" the members, especially new members. In this respect, it is invariably a complete success!

* * *

Tom Galvin, well known bon vivant of the industrial soap business for many a year, recently retired from Armour, is now the owner, managing director, manager, et al, of a thriving modern launderette in, near or adjacent to Miami, Florida. If the report is true, we wonder whose soap Tom is recommending to his customers?

Penetration!



NOT just a smattering of circulation here and there, but a genuinely specialized and concentrated circulation is what increases advertising effectiveness and gives deep penetration of the market. Real specialized coverage such as you get in the field of soaps, detergents, disinfectants, deodorants, floor products, aerosols, and allied chemical specialties by regular advertising in

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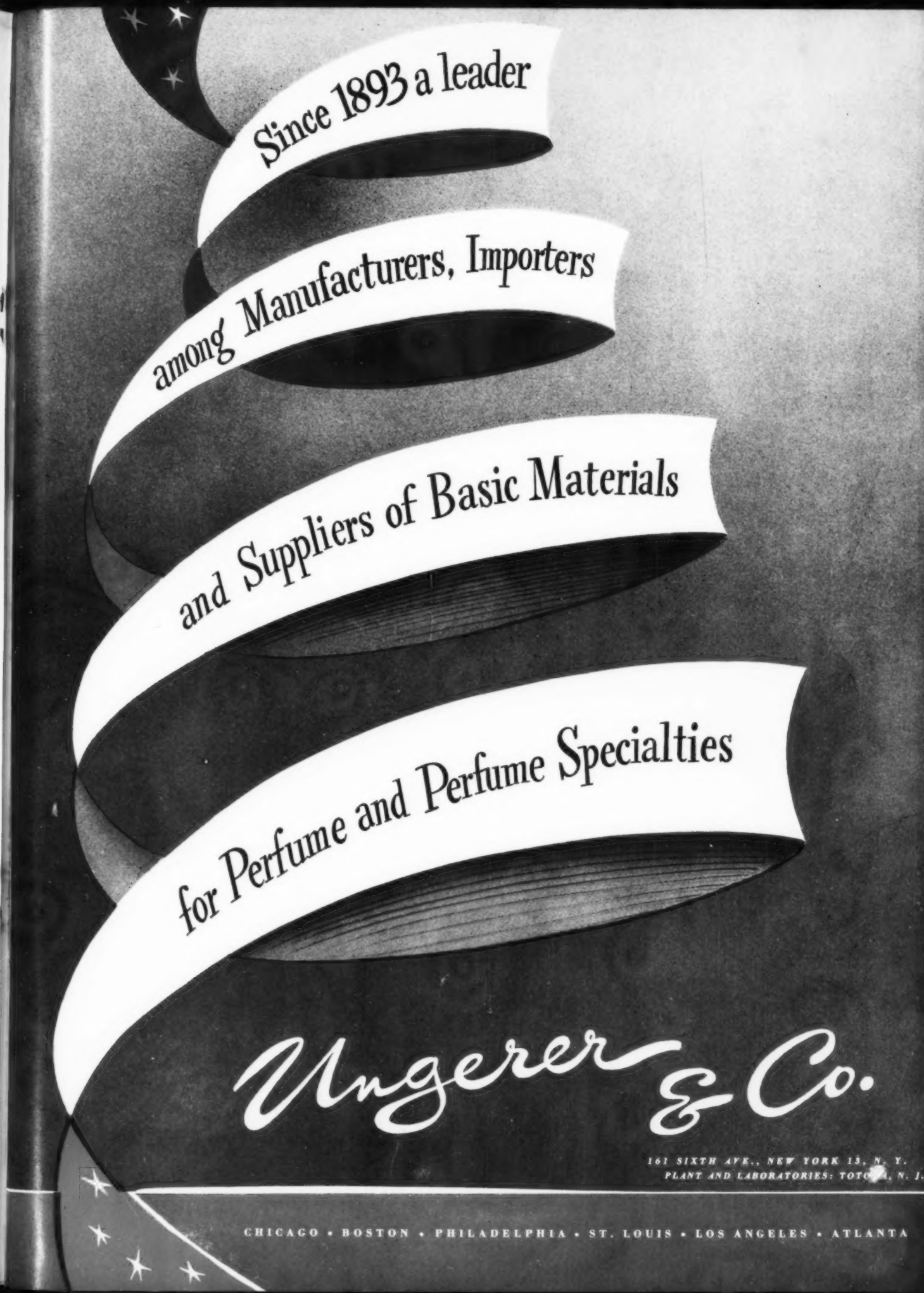
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